The Lumleian Lectures
ON
CONVULSIVE SEIZURES.

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LECTURE I.

MR. PRESIDENT AND GENTLEMEN,—There are two pleasant preliminaries, the sole parts of my address, I can enter upon with a light heart. The first is most earnestly to thank you, Mr. President, for the honour you conferred on me in asking me to deliver the Lumleian lectures. There is one thing for which I cannot blame myself. I have, as was my duty, taken all the pains I could over the task you were so good as to assign to me. The second preliminary is to mention my great obligations to Dr. Ferrier. There are very few men of the day by whom the art and science of Medicine have been so greatly helped. It is only since his remarkable researches that medical men in this country have studied Convulsions in a thoroughly realistic way. Without further particular acknowledgments, I make the general one—that all over the field of neurology I am profoundly indebted to Dr. Ferrier.

Convulsions and other paroxysms are owing to (1) sudden, (2) excessive, and (3) temporary nervous discharges.[1] There are nervous discharges in all the operations of health. I should use the term "explosive discharge" for the abnormal liberation of energy in convulsions were it not that physiologists speak of "explosive decomposition of the muscle's substance" which gives rise to contraction of the muscle in health; and thus it may be that normal nervous discharges, those in the operations of healthy people, are "explosive." So then I use the word "excessive" for the discharges which have the three characters mentioned, the words "sudden" and "temporary," or the word "paroxysmal," being understood; when dealing with convulsions, it will not be always necessary to add the term "excessive." I shall, however, occasionally use "explosive" for states of cells of a discharging lesion, qualifying it by the word "highly," and sometimes the term "high instability." I do not speak of "disorderly discharges;" for if in some ways the expression be correct, it hides from us the fact that the most brutal-looking convulsion is only the sign of a *departure* by a vast excess, and by a caricature from normal nervous discharges.

I have always assumed, and shall continue to suppose, that convulsion results from excessive discharges of nerve cells, meaning of course liberation of energy during rapid decomposition (katabolism) of some matter *in*, or *of part of*, those cells. I shall frequently speak of cells concerned with excessive (primary) discharges as constituting a "discharging lesion," and sometimes of them as making up a "physiological fulminate," or occasionally, using Mr. Horsley's term, of their being together an "epileptogenous focus." Some material of the cells which make up the discharging lesion has, by morbid, nutrition, become of very high tension and of most unstable equilibrium (briefly of high instability), and occasionally discharges excessively. I do not assert that excessive (primary) discharges producing convulsions always depend on a *persistent* state of high instability of cells; to give but one example to the contrary, excessive discharges beginning in a healthy rabbit's respiratory centres are induced by rapidly bleeding the animal to death, or by quickly asphyxiating it.

The discharging lesion, though I speak of it as persistent, is yet varying.[2] The discharges are occasional. After their excessive discharge the cells are, no doubt, far below the degree of stability (properly comparatively slight instability) of normal cells; they will re-attain a highly abnormal degree of instability—again become highly explosive—by further morbid nutrition. These qualifying remarks should be borne in mind, and especially when I come to speak of the discharging lesion as a fulminate—it is occasionally fulminant.

I make three classes or kinds of convulsions. Convulsions, or I will say fits, differ in kind, according as centres discharged differ in rank; or, speaking more definitely, as the centres *first engaged* in paroxysms make up different evolutionary levels of the central nervous system. I have several times suggested that there are three levels of the cerebral (central) nervous system; each is sensori-motor, and each represents impressions and movements of all parts of the body. I speak briefly of what I suppose to be the hierarchy of the centres of the nervous system as a basis for the classification of fits.

1. The lowest or first level is roughly and incompletely defined as consisting of cord, medulla, and pons, and more completely, and yet still roughly, as being that sensori-motor division of the central nervous system to and from which pass nerves (all cranial and all spinal nerves) for every part of the body. This level, speaking of its motor elements, represents simplest movements of all parts of the body by a series of lowest motor centres (lowest motor centre being a proper name for a centre of the lowest level), from those in the floor of the aqueduct of Sylvius, for simplest movements of the ocular muscles, to those of the sacral cord, for simplest movements of the muscles of the perineum. This universally representing level is cerebro-cerebellar; it is at once the lowest level of the cerebral system and of the cerebellar system. For the present I ignore the higher levels of the cerebellar system, and go on to speak of two higher levels of the cerebral system. These levels are, as the lowest level is, sensori-motor, but I find it possible to illustrate by motor centres only, not, however, believing that these so-called "motor centres" are purely motor. 2. The middle or second level (its motor province) of the cerebral system is composed of centres of the Rolandic region (so-called "motor region" of the cerebral cortex), and possibly of the ganglia of the corpus striatum also. It represents complex movements of all parts of the body from eyes to perineum (re-represents). 3. The highest or third level (its motor province) of the cerebral system is made up of centres of the præ-frontal lobes (highest motor centres, motor division of the "organ of mind"). It represents most complex movements of all parts of the body from eyes to perineum (re-re-represents).

There are, I submit, three kinds of fits corresponding to the three evolutionary levels. It is convenient to speak of the three kinds in an order different from that used in stating the levels. (2) I mention epileptiform seizures first because their localisation is not doubtful. (They were first described by Bravais in 1824.) They are "middle level fits"—that is, they are produced by excessive discharges beginning in parts of the middle level (motor province) of the cerebral system ("motor region"). My hypothesis is that (3) fits of epilepsy proper ("genuine epilepsy" of some nosologists) are "highest level fits," and that many of them, not all, are produced by excessive discharges beginning in parts of the præ-frontal lobes, highest level (motor province) of the cerebral system. Although the præ-frontal lobes are not experimentally excitable, I suppose it will not be denied that their cells katabolise and liberate energy in their normal activities, and it is not unreasonable to suppose that parts of them may, by pathological changes, become highly explosive, so that that they occasionally discharge excessively. So that if the præ-frontal lobes are divisions of the "intellectual centres," as no doubt they are, and not, as I think, motor too, excessive discharge beginning in parts of them may produce epileptic fits. Of course this is speculative. I am not aware that anyone pretends to *know* the seat or the pathology of cases of "genuine epilepsy." I do not use the term "cortical epilepsy," because both epileptic and epileptiform seizures are, to my thinking, cortical fits. (The difference in meaning assigned to the two terms epilep*tic* and epilept*iform* must never be lost sight of.) (1) I think that there are "lowest level fits"; these are fits produced by excessive discharges beginning in parts of the lowest level, a level which is common to the cerebral and the cerebellar systems. I suppose that most of them are owing to excessive discharges beginning in centres of the bulbar and pontal regions of the level; hence, I sometimes use the term "ponto-bulbar fits." With regard to epileptic

[1] A term introduced by Dr. Edward Liveing in his masterly work "On Megrim" is "nerve-storm." This term has met with much favour, and the conception it stands for has been of great value in elucidating some very complex problems in neurology.

[2] The rapid reader must not take "*persistent* discharging lesion" to be "*persistently* discharging lesion."

form and epileptic fits, I deal almost exclusively with cases of patients *subject to fits*—with, so to speak, "chronic cases."

I have so far spoken only of three *Kinds* of fits. No doubt there are *Varieties* of each kind. Whilst the kind answers to the level, the variety of each kind answers to the particular *part* of the level in which the excessive discharge *begins*. It is certain that there are varieties of (2) epileptiform seizures; each is marked by a particular place of onset of the convulsion. There must be at least as many varieties of (3) epilepsy proper as there are different "warnings" of the paroxysms. Presumably there are varieties of (1) ponto-bulbar fits.

Then, of course, there are degrees of each variety dependent directly on degree of the primary discharge and indirectly on that of the secondary discharges. (2) For example, there are degrees of that variety of epileptiform seizures marked by the first spasm being of the thumb. There are many ranges of it, from convulsion almost limited to a thumb, thence onward to universal convulsion. (3) Everybody recognises that epileptic attacks occur in two vastly different degrees, *les petits maux* and *les grands maux*, and there are sub-degrees of each of these degrees. (1) There are degrees of convulsion in lowest level fits produced by Brown-Séquard's method in guinea-pigs. There are, no doubt, degrees of respiratory fits produced in certain lower animals by rapid bleeding, by ligature of the great arteries of the neck, and by sudden stoppage of respiration.

To repeat, "fit" is a term used to include convulsive paroxysms of all kinds dependent on excessive discharges beginning in any part of any one of the three levels, the epileptic and epileptiform beginning in one half of a level. There are three kinds of fits—(1) ponto-bulbar, (2) epileptiform, and (3) epileptic. There are, the supposition is, varieties of each kind and degrees of each variety of each kind.

As I shall not have time to deal with Lowest Level Fits, I will merely mention what I think are some fits of this kind, not classifying them, but making a rough arrangement into three groups. (1) *Respiratory Fits* (respiratorily beginning from primary discharge of the head respiratory centre).—I think (*Brain*, April, 1886) that fits of laryngismus stridulus come in this category, but Dr. Semon thinks they are cortical seizures. Respiratory fits are easily induced in animals, and are described in all works on physiology when asphyxia is considered. Kussmaul-Tenner fits are respiratory fits. (2) *Fits produced by Convulsant Poisons* (fits from nitrous oxide and curara are respiratory fits).—Fits are experimentally produced in animals by absinthe and camphor. (Many years ago Dr. George Johnson described convulsions in man from poisoning by camphor.) Possibly some fits in renal disease (some so-called uræmic fits) and, it may be, fits occasionally part of a constitutional disturbance after urethral lesions, are lowest level fits from home-made poisons, as those just spoken of are supposed to be from foreign poisons. (3) *A condition for Fits consequent on certain injuries of the cord or sciatic nerve in guinea-pigs* (Brown-Séquard). These are so well known that mere mention will suffice. There are often fits attending the onset of infantile paralysis; these are very difficult of explanation. I submit the hypothesis that they are lowest level fits produced by action on the ponto-bulbar centres of ptomaines the result of disintegration of nervous matter of the anterior horns; if so they come in Group 1.

In all severe lowest level fits it is supposed that the primary discharge of ponto-bulbar centres not only induces discharge of other lowest motor centres, but also that by intermediation of sensory ("ascending") fibres it discharges centres of higher levels. (I never thought of implication of higher centres in these or any other fits by intermediation of sensory nerves until after consideration of the researches of Victor Horsley and Binswanger.)

It is necessary now to speak of abnormal affections of consciousness with regard to kinds of fits. I presume that there is loss of it in severe fits of all kinds. Consciousness is not a function of the highest cerebral centres; it is simply concomitant with their functioning. There is no physiology of the mind any more than there is a psychology of the nervous system. On the basis of mere concomitance mental symptoms (synonymously abnormal states of consciousness) are, strictly speaking, only signs to physicians of what is not going on or of what is going on wrongly in part of a patient's material organisation. Thus cessation of consciousness *at, or close upon, the onset* of an epileptic fit is of value to physicians as a sign that the correlative physical process, the excessive discharge, begins in some part of the "organ of mind," or, equivalently, highest centres of the cerebral system; the physical process in these and all other kinds of fits is our proper concern as medical men. Consciousness is lost late in epileptiform seizures, and in those of but little range there may not be even defect of consciousness; this agrees with the empirical evidence that the excessive discharge begins in lower (middle motor) centres; probably excessive discharges are induced (upwards) in the highest sensori-motor centres by intermediation of sensory fibres when consciousness begins to cease in an epileptiform seizure. Availing ourselves of abnormal affections of consciousness as signs of the state of the central nervous system, we next, so to speak, put them on one side in order to study the process in fits in a purely materialistic manner.

It will be observed that I have spoken of the excessive discharge productive of fits *beginning* in this or that level; further, of its beginning in some *part* of a level. In recapitulation, the primary discharge in all kinds of fits is of some part of but one of the levels. And now I add that in epileptic and epileptiform seizures the excessive discharge begins in some part of one half (lateral) of a level; thus, so to say, in these fits the discharging lesion is "doubly local." If the discharging lesion be, as I suppose, of but a few cells, very little of a convulsion is directly due to it. Most of the convulsion is produced by intermediation of fibres between the cells of the discharging lesion and other cells of its own level and of other levels; there are induced consecutive discharges of normal stable cells. Hence the interconnecting fibres of each level and the fibres connecting the several levels with one another, and the fibres connecting the lowest level with all parts of the body (lowest level of the whole organism), have to be considered. (I shall strain the meaning of the word fibre, making it stand for any kind of nervous pathway ensuring physiological union, definite or indefinite.) Consideration of these connexions is essential for clear ideas of the full process in fits, the only visible part of which is convulsion; it is especially important with regard to the way by which in epileptiform seizures a very local (a "doubly local") discharging lesion causes wide-spreading and even universalisation of convulsion. Again, the study of the inter-connexions of the levels is a necessary preliminary to the comparison and contrast of the effects of "discharging lesions" and of "destructive lesions," an essential thing in the scientific investigation of diseases of the nervous system, as I urged in my Gulstonian lectures (1869). I speak only of connexions of motor centres of the levels.

Each level being bilateral is a twin series (right and left) of centres there are connexions (commissures) between "identical" centres and between "non-identical" centres of its two halves—presumably of centres of the two halves as they correspond for co-operation of the parts of the body they represent in joint operations by the two sides of the body. There are also connexions between the centres making up the lateral half of each level. The fibres of the two sets of connexions spoken of are Intrinsic Fibres of the level. I speak next of Extrinsic Fibres—that is, of those interconnecting levels. Considering for a moment all the levels, the motor path,[3] or, as I shall say, kinetic route, extends from the highest motor centres to the muscles, which in a certain regard, being dischargeable, are centres too. This route (strictly the three series of motor centres are parts of the kinetic route) is in three segments: from highest to middle centres, first segment; from middle to lowest, second segment; and from lowest to muscles, third segment. I can, however, consider in detail only the second segment of the kinetic route, that connecting the middle and lowest levels. I shall, for convenience, speak of the motor centres of the right half of the middle level. There are three sets of motor fibres, kinetic lines of the second segment, uniting all right middle motor centres to all lowest motor centres—at least, to all motor centres of the left half of the lowest level, if not, as I imagine, to those of the right also.

First Set of Fibres of the Second Segment: those which have been traced (on the Wallerian method by Charcot and others) from the right "motor region" along the right

[3] Dr. Gowers (Diseases of the Nervous System, vol. i., p. 116) gives a diagram of the "motor path." He makes two segments, "cerebro-spinal" and "spino-muscular." The kinetic route is a modification of his scheme.

corona radiata, right internal capsule, through the right crus cerebri, right halves of pons and medulla into the (left) lateral column of the cord, as low, Sherrington has found in one case, as the origin of the coccygeal nerve-roots. These fibres are (and so are the second and third sets) Extrinsic of the levels; they belong to neither, and yet they belong to both in the sense of interconnecting the two. *Second Set of Fibres:* those of the direct pyramidal tract. They have been said to be traceable no lower than the mid-dorsal region. Tooth has traced them in one case as low at least as the second lumbar; these are fibres of the inner part of the right anterior (Turck's) column. *Third Set of Fibres:* comparatively recently (1884) discovered by Pitres, and seen by Schäfer, Sherrington, Hadden, Tooth, France, and others. These fibres have been traced into the right lateral column. The degeneration in the (right) lateral column in cases of (left) hemiplegia is recognised by Charcot. So we see that the interconnexion of the middle and lowest motor centres is very complex.

Some years ago[4] I inferred from the then known connexions of both halves of the cord (by the first and second set of fibres) that both sides of the body are represented in the right half of the brain (I still say "right" for convenience), but that considering the degenerated fibres were of different columns (the left lateral and the right anterior), that the left and right sides of the body were differently represented in the right half of the brain. (This, I have since stated, seems to me to be but an expansion and modification of the principle of Broadbent's well-known hypothesis as to the double representation of the bilaterally acting muscles.) I should have thought the discovery of the third set of fibres rendered my hypothesis more tenable. But there are serious difficulties. The second set of fibres (those found in the right anterior column) are supposed by some great neurologists to cross to the left half of the cord.[5] The same has been said of the third set of fibres found in the right lateral column. So that it may be that all three sets of fibres pass from the right middle to the left lowest motor centres. It is, however, not really known where the second and third sets of fibres end. No wasted fibres are found in the anterior commissures. Hence, I provisionally keep to the hypothesis mentioned, and now say regarding it that the three sets of fibres may show that the right middle motor centres are connected with lowest motor centres of the left and right halves of the lowest level, and thus that the right middle motor centres represent, by intermediation of the twin lowest motor centres, movements of muscles of both sides of the body. There is still another matter to be considered before I can illustrate this hypothesis.

Having considered the whole central nervous system with the rest of the body represented by it as a sensori-motor mechanism, I now wish to urge that the motor centres of every level represent movements of muscles, not muscles in their individual character; the same muscles—that is, all the muscles—are represented in Simplest, in Complex, and in Most Complex movements by respectively the lowest, middle, and highest motor (better "movement") centres. If so, it is possible, as I believe happens in hemiplegia, to lose one series of movements of muscles, and to retain another series of movements of the very same muscles. Thus, to take a case of left hemiplegia in which the right middle motor centres, if not destroyed, are cut off from lowest motor centres (to neglect the second and third sets of fibres), the condition is not properly described as "loss of power of the muscles" of the left arm and leg, but as loss of complex movements of the muscles of those limbs. The simplest movements of the very same muscles remain represented by the left lowest motor centres. The muscles certainly are unaffected, and when rigidity comes on the simplest movements of them are developed by over-activity of their lowest motor centres. The fixed rigid state of the left arm and leg, which clinically we speak of as a symptom, as if it were something *sui generis*, is only the algebraical sum of the co-operating and antagonising "pulls" of the simplest movements of the muscles of these limbs.

If the hemiplegia be very slight, we may say that the muscles of the left arm and leg "are only a little weak," but the strict description is that there is then loss of but a very few complex movements of all the muscles of these limbs, with persistence of the rest of the complex and of all of the simplest movements of those same muscles. Similarly convulsion is not to be looked on as convulsion of muscles; in an epileptiform seizure the convulsion is a contention of complex and also of simplest movements. In this contention the individuality of each movement is lost. I will take a more complex case—that of a man imperfectly and permanently hemiplegic, and yet subject to occasional epileptiform convulsion of the region paralysed; the paralysis is loss of but some of the complex movements of all the muscles of the arm and leg, and there is persistence of the whole of the simplest movements of all those muscles; when the fit comes, there is a temporary contention of the remaining complex movements and of the simplest movements of all those muscles.

The distinction between muscles and movements of muscles is exceedingly important all over the field of neurology; I think the current doctrine of "abrupt" localisation would not be so much in favour if it were made. The occurrence of convulsion of a muscular region which is already imperfectly and yet permanently paralysed is unintelligible without that distinction. And without it we shall not understand how it can happen that there is loss of some movements of a muscular region without obvious disability in that region. This bears closely on the realistic study of the physical conditions in aphasia and insanity. We are concerned with both these morbid affections in this inquiry. The anatomical loss in cases of aphasia is of certain complex movements of the tongue, palate, &c.; there is paralysis in that sense. In cases of insanity (post-epileptic states, for example) there is, I submit, corresponding to the negative element of the psychical symptomatology paralysis in the sense of loss of some of the *most complex* combinations of impressions or of *most complex* movements, or of both.

At a first glance it seems absurd to say that there is no obvious disability in a muscular region, and also that there is loss of some movements of that region. This is, however, what I do affirm confidently. An eminent physician, referring to a previous statement of mine[6] to that effect, described my aim as being to prove two things—that a motor centre *does* and also that it *does not* represent movements. I never consciously attempted that very marvellous feat. Then, as now, I am content with the supposition that the non-disability of a muscular region when some movements of it are lost by destruction of part of a centre is accounted for by that muscular region being represented by other movements in other parts of the centre or in other centres. On this supposition of compensation we can explain prompt recovery from hemiplegia (without implicit reliance on the hypothesis of subsidence of "shock" or diminished pressure) dependent on very small destructive lesions; there is recovery when a few movements are permanently lost. That the seeming paradox holds for some cases is undeniable, as the experiments of Semon and Horsley on the cortical representation of the vocal cords show. These experiments give a crucial verification of Broadbent's well-known hypothesis for one case. Moreover, France[7] has found degeneration in the lateral column of the cord after lesions of the gyrus fornicatus in monkeys. Although in the monkeys mutilated as mentioned there is no discoverable disability in any muscular region, I submit that the degeneration France describes is proof of loss of some movements, skeletal or visceral, or possibly of negative movements (inhibitory). It would be remarkable if there were any conspicuous disability, considering the enormous compensation given by the intact "motor region." I can now return to the question of representation of both sides of the body in each half of the brain.

I suppose that the right "motor region" represents complex movements of muscles of both sides of the body (1) as they serve in bilateral actions, (2) as they serve in alternate actions (or, I should say, with preponderance of activity on one side), and (3) as they serve in unilateral actions. But I suppose, too, that those movements which are "bilateral" are represented most nearly equally in right and left halves; that those which are "alternate" are represented less equally in the two halves (those of the left side more in the right half), and that those which are "unilateral" are represented most unequally in the two halves (those of the left side most in the right half). It is important to remember that movements are spoken of, for the so-called alternate muscles may serve in bilateral movements; they

[4] Med. Times and Gaz., Oct. 23rd, 1869.
[5] Gowers' Diseases of the Nervous System, vol. i., p. 114.
[6] British Medical Journal, May 10th, 1873.
[7] Phil. Trans., B 41, 1889.

may serve with a great degree of preponderance on one side approaching unilateral movement; and the most unilateral muscles may serve in bilateral movements.

It may, however, be asked, Where is the paralysis corresponding to abrogation of the second and third sets of fibres from the right "motor region"? The existence of some weakness of the right side (the so-called non-paralysed side) has been urged by Brown-Séquard, Pitres, Friedlander, and Gowers; but when in the difficult circumstances attending investigation of the state of the right side no disability is demonstrable, there may yet be loss of some few movements of the muscles of that side. The loss of these few movements is masked by the compensation given by the left half of the brain, which represents most numerous movements of the right side. If we take the case of excessive discharge beginning in some part of the right middle motor centres, we find that, in severe epileptiform fits, both sides of the body are convulsed. In this case compensation is "inverted"—that is to say, centres which would compensate a loss are compelled *to co-operate in an excess*. I shall speak further on this subject when dealing with the universalisation of an epileptiform convulsion.

ABSTRACT OF THE
Milroy Lectures
ON THE
ETIOLOGY AND PREVENTION OF PHTHISIS.

Delivered at the Royal College of Physicians,

BY ARTHUR RANSOME, M.D., F.R.S.

LECTURE IV.

THE PREVENTION OF PHTHISIS.

WE have now completed our survey of most of the conditions that are favourable or unfavourable to the development within the body of the bacillus of tubercle, and we have found that they may be briefly summed up under the following heads:—(1) Congenital taint or inherited proclivity to disease; (2) tendency to the disease acquired by unhealthy modes of life; (3) sources of possible infection or means of access; and (4) conditions that foster the organism in the neighbourhood of persons susceptible to the infection. We are therefore now in a position to consider what is possible to be done or attempted to prevent the disease from attacking both human beings and animals. With regard to inherited tuberculosis or inherited vulnerability by the virus, if we were to accept Baumgarten's theory of the origin of the disease by spores which are implanted in us by our ancestors, and which may remain latent all our lives, we should indeed despair of ever casting out this plague from our midst. But it is quite otherwise with regard to inherited predisposition, if this consists, as we believe it does, mainly in a vulnerability only, and if in nearly all cases the actual germ of the disease comes from without the body. In this case it is quite possible to save even susceptible persons by keeping them out of the way of infection, by clearing away the sources of the virus, or by doing away with the conditions under which it can exist. Though it is doubtless highly important to do what lies in our power to deter consumptive patients from marriage, the means by which this may be accomplished are very few and inadequate. Prohibitory rules, forbidding marriage between members of tuberculous families, have been proposed, but the impossibility of enforcing them has been acknowledged. Still medical men and ministers of religion may do a great deal to discountenance marriages between relations, especially when the family has been tainted by tubercle. But when, in spite of all checks, these marriages have taken place, I believe that much may be done to save the offspring from the disease, especially if the children have not been suckled by a consumptive mother. A well-drained, high, and airy site for the dwelling, entire cleanliness of house, clothing, and person, fresh air and light and abundance of good food, due exercise and rest, care during illness, and so on. Milk and easily digested fats should form an adequate part of the diet, and the milk should in every case be scrupulously boiled, and in some cases peptonised or used as koumiss or junket. Free ventilation is especially needed, and exercise should be such as to develop the chest as much as possible, by games and by carefully graduated gymnastic exercises carried on in an open dustless atmosphere. After measles and whooping-cough, thorough examinations should be made to see that there is no lingering affection of the lungs, and that the chest is not left deformed in any way. Equal care must be exercised after any of the exanthemata. Where enlarged lymphatic glands are left, they must be regarded as a possible source of danger, especially when they are the sequel of some external eruption or sore. With rich children education should not be over-pressed, and it should be carried on in well-ventilated rooms; the school should be on a high and dry site, and the dormitories as well as the school rooms should be inspected to see that there is sufficient cubic space. The business or profession chosen should be one in which there will be but little office work, and as much out-door employment as possible: such as a farmer, a breeder of cattle, a land steward or agent, a surveyor or civil engineer. In a low grade other occupations may have to be selected: an agricultural labourer, a sailor or fisherman, a carter, butcher, or cab-driver. Something more needs to be done for the children of the poor by the various public bodies, especially in the direction of securing better methods for the warming and ventilation of schools.

Many of the remarks now made will apply, at any rate in principle, to the subjects of an acquired tendency to consumption; with regard to chest affections, however, we may use some discrimination in selecting cases that must be submitted to the needful restrictions. During attacks of acute bronchitis, pleurisy, broncho-pneumonia, and other inflammatory complaints, care must be taken to secure the complete resolution of the disease. After pleurisy, so long as there remains any contraction of the chest and want of full expansile power, there is undoubtedly danger of phthisis following. Though this in some cases may be from the first itself tubercular, in others the tubercular infection is engrafted upon the injured organ at a period too remote from the original disease for it to have been its immediate precursor. In all cases where the thoracic movements are impaired by the attack I have formed an unfavourable prognosis, an opinion that has been only too often confirmed by the result, though in several cases the supervening phthisis has been some years before it has made its appearance. The occurrence of phthisis is less to be dreaded in chronic bronchitis, asthma, and emphysema, though in the partial emphysema that arises from atelectasis or impairment of certain portions only of the lung a deposit of tubercle is only too likely to take place in the areas thus injured. Although hæmoptysis is frequently only a sign of incipient tubercular disease, I am convinced that it is also sometimes simply its precursor, and the resulting phthisis has in my experience been more acute in its course. To guard against infection in this class of cases, and in all in whom there is a predisposition to phthisis, I have been in the habit of recommending the temporary use of respirators charged with eucalyptol when such people are obliged to attend crowded assemblies of any kind. With regard to the precautions that should be taken in the case of dusty work, it is probably hopeless to expect that workpeople will use respirators to catch the dust on its way to the mouth, but fans are now almost universally employed to sweep it away from the worker. They should be warned of the necessity of attending to the first beginnings of lung trouble, for in their first inception many of these cases are not tuberculous. In all cases of incipient chronic lung disease wherever possible an attempt should be made to obtain plenty of fresh air and sunshine, whether by change of climate or otherwise.

With regard to the ingestion of tuberculous food, it is probable that too great laxity prevails in the inspection of butcher's meat, and that its sale should be subject to more stringent regulation than is now the case in our large towns. In France it is provided that "whenever the tubercular process affects the lining membrane of the chest or abdomen the entire carcase shall be condemned," but in most other countries it is considered sufficient, when the disease is entirely local, to cut out the diseased parts and suffer the meat to be sold if otherwise sound and the beast well nourished. It is, however, essential that the meat in

question should be well cooked, and it seems to me desirable that the Prussian practice should be followed of plainly labeling meat that is regarded as in the least degree suspicious by the inspector, who should not suffer it to be sold without a caution to the buyer. Still more decided precautions should be taken with regard to milk from tuberculous cows; its sale should be prohibited, and in order to avoid infection care should be taken by the heads of families to make sure as to the untainted source of the milk, and to insist upon its being boiled before use. Probably many more cases of infection from this source would occur in towns if it were not for the fact that mixing of the milk of many cows diminishes by dilution the risk of conveying the disease. It is urgently necessary that the laws relating to the sale of tuberculous cattle and the milk supplied from them should be amended without delay, and also that some concentrated action should be taken by the health authorities with reference to the sale of milk in towns. I am informed that several towns have obtained private Acts by which it is provided that their medical officers of health may inspect any dairies beyond their boroughs from which milk is supplied to them, and these provisions are included amongst the model clauses which may hereafter be the subject of general legislation; but it is not apparent from these clauses that any power is given to inspect the cows themselves in order to judge whether they are tuberculous or not.

The next and, I believe, the most important media for propagating consumption are the houses people dwell in, and the rooms in which they congregate together. Architects and builders of all classes of dwellings have been in the past, and are still, largely responsible for a very large proportion of preventable mortality. It is only right that we should look to them in the future to rectify the mischievous modes of construction both of mansions, cottages, and public buildings of all kinds that have proved such a fertile source of disease, and especially of consumption. In accordance with modern sanitary requirements they must see to the exclusion of noxious ground air from houses, to the prevention of harbourage of dust, to giving sufficiently copious streams of air without draughts, and to the extraction of foul air as soon as it is produced, and to the provision of abundance of light. Sir D. Galton, in his excellent work on healthy houses, gives ample and detailed instructions as to how these several objects may be accomplished. The model by-laws of the Local Government Board would, if fully carried out, to a great extent do away with the merely structural causes of phthisis. The regulations as to the width of streets, space around houses, concreting of cellars and foundation, damp-proof courses, quality of materials and structure of fireplaces are of especial value in relation to our subject. It is to be regretted that the framers of these laws could not see their way to insisting that no street shall be built up at its end, that as much as possible they shall run in straight lines, and that in addition to the regulation as to fireplaces a minimum allowance of ventilating means should be insisted upon, as in the case of barracks.

Much greater care should be exercised in respect to the warming and ventilation of public buildings. The openings for the latter purpose are for the most part quite inadequate, and the means of extracting foul air are often futile. It is a question also if the methods used for introducing warmed air do not generally devitalise it and make it unfit for healthy respiration. The model by-laws only apply to new streets and buildings, but it is in the old parts of most large towns that the favourite breeding places of phthisis are to be found. The small, cramped dwellings should be razed to the ground if incapable of alteration; back-to-back houses should be converted into double houses, with through ventilation; closed streets, courts, and alleys should be opened up, and decent habitable homes built in their place, with breathing spaces and playgrounds in their midst. Numerous Acts of Parliament have been passed since the first Labouring Classes' Lodging-house Act of 1851, all of them having for their object the improvement of the dwellings of the working classes; and finally in 1885, after a Royal Commission had sat upon the subject and had reported that local authorities now really possessed ample powers, which for the most part they did not use, for improving cottage dwellings, a most important clause was introduced into the Housing of the Working Classes Act of 1885, which made compulsory all that was only left permissive in previous Acts. In the matter of atmospheric impurities, cleanliness, light, and ventilation must be our chief resources; the cleanly housewife's horror of dust has a more scientific basis than she dreams of. All furniture and room fittings should be so made as not to be harbourers of dust, with their edges beveled off and rounded; and it would also be a good thing if the contents of the dustpan were invariably burnt at once. It is interesting to note that the influence of dirt as a fosterer of micro-organisms in the air has been placed upon a scientific basis. In badly ventilated schools micro-organisms increase up to a certain point with increase of wall and door space, whereas in mechanically ventilated schools, where the air is quickly renewed, the micro-organisms decrease with increase of cubic space. One would expect that the chief source of these organisms is the floor, especially the loose dirt lying about on its surface, but the effect of scrubbing, which would remove the loose dirt, has been found to make very little difference. Probably nothing short of total destruction would clear some of the older buildings from germs. Even if we supposed that all the precautions so far mentioned could be strictly carried out, much still remains to be done before we can exorcise the demon of tuberculosis. People must be educated to take advantage of the arrangements that we may hope will be made for their comfort and well-being. It would be a most beneficial thing if sanitary associations or healthy home societies could be established in every town in the kingdom.

Hitherto we have been occupied with the external precautions to be taken against absorbing the tubercular virus; we must turn now to those relating to the consumptive sufferer himself. Both the urine and the fæces have been found to contain bacilli, and should therefore be disinfected or otherwise safely disposed of. We have seen that the most fertile source of infection in phthisis is probably dried sputum carelessly expectorated. Englishmen are rather inclined to sneer at the abundant provision made on the Continent for the reception of expectorated matter, but it might be well for us if we were more cleanly in this respect in this country. All such receptacles should be filled preferably with some liquid disinfectant or with sawdust that has been previously charged with it, and their contents, like those of the dustbins, should be scrupulously burnt, either on kitchen fires or in a furnace provided for the purpose by the town authorities. Phthisical patients should carry with them and use small portable spittoons that could be worn in the pocket. They can be made for a few pence, and can be lined with paper charged with disinfecting substances, and their contents could readily be consigned to the fire at convenient intervals. Numerous experiments have been made to determine the best means of disinfecting tubercular material. Villemin found that the following ingredients mixed with the cultivating medium completely sterilised it in the proportions which he employed: hydrofluoric and salicylic acids, fluosilicates of potassium, sodium and iron, ammonia, naphthol (α and β), polysulphuret of potassium, tartaric emetic, and sulphate of copper. The following substances also prevent all development: mercuric ethyl, in the proportion of 1 in 35,000; benzoate of ethyl, 1 in 3000; benzoate of methyl, 1 in 12,000; but menthol and iodoform had only a retarding influence; corrosive sublimate had also been found most efficient. Successful inoculations with the juice of muscle from tuberculous animals have been made after it has been raised for twenty minutes to a temperature of 60°, and for ten minutes to a temperature of 71°, a heat which is not exceeded in the centre of a large piece of meat cooked on the gridiron. Desiccation, putrefaction for from ten to twenty days, freezing at temperatures from three to eight degrees below zero, alternate freezing and thawing; none of these conditions destroy the infective power of tuberculous matter. The urine of tuberculous animals has also been found to be virulent; it seems, in fact, to be indispensable to insist on the disinfection of all objects soiled by tuberculous animals, of their excretions, of places they have occupied, of their dung-heaps, &c., in order to prevent the dissemination of the disease and its transmission to man. For the sputum mercuric chloride (1 in 500) is useful; for the stools and urine probably the best agents would be sulphate of copper or sulphate of iron, but where waterclosets are used there is probably not much danger from this source.

If all the suggestions that have so far been made were carried into effect, we might fairly hope that in a few years

there would be a considerable reduction of the phthisis death-rate; but in spite of preventive efforts there would remain a large number of persons suffering from the disease, and it would become a serious question for the public and for the State whether such persons, if they are without proper lodging and accommodation for preventing infection, should not be provided with asylums or hospital accommodation until the disease is either cured or ends in death. Enormous sums have been spent in the past in the isolation of leprosy, which is less easy to control by such a method; and if a poor country like Norway can provide asylums for a large proportion of its lepers, it is not too much to ask Great Britain to make the attempt to segregate those consumptives who are likely to be a source of danger to the community. At the present time the accommodation for these cases is very small, though they are free to attend general hospitals as out-patients, and thus can scatter abroad the infective material in places where many persons peculiarly prone to the disease are sure to congregate. To attempt this isolation is a stupendous and perhaps entirely impracticable idea, for it would cost several millions to provide for even a moiety of the consumptives of this country; but I would simply ask that phthisis should be placed in the same list with other diseases requiring special measures to prevent their spread. Although phthisis is not directly contagious I venture to contend that there would be nothing unreasonable in thus classing it; for it is strictly analogous to enteric fever. I would class phthisis with other infective disorders, so that every case as soon as it is discovered should be notified to the medical officers of health. If necessary it should be visited to ascertain whether proper care is or can be taken to prevent injury to the public health; if the case is that of a poor person, the local authority should see to the regular cleansing and whitewashing of the premises, to the disposal of excreta, including especially the expectorated material. They should also inquire into, and rectify, if necessary, the drainage and ventilation of the dwelling, and after death special measures should be taken for the cleansing and disinfection of house, bedding, and clothes. When the patient becomes unable to follow his employment he should be offered such an asylum as a workhouse hospital, which should be made as little humiliating and as free from ignominy as possible. When such a hospital is efficiently administered, there could be probably no better fate in store for the poor invalid who might even be restored to his family and be able to return to his work. For patients not reduced to pauperism, male and female wards might be constructed in connexion with the hospital for infectious diseases, and there is still a wide field open to private benevolence in the provision of sanatoriums or homes for these unfortunates. The hospital accommodation for cases of phthisis is most inadequate, and in place of the half-dozen such institutions outside the metropolis, there ought to be hundreds of them scattered about the country in suitable localities and attached to all the chief centres of the population. Advantage might perhaps be taken of some of the funds left for the leper-houses, and they might be applied to the treatment of a strictly analogous and closely allied form of disease.

In conclusion, perhaps I may be allowed to say a few words as to the principles that should guide us in endeavouring to check the disease at its onset. A very little study of the pathology of the disease will convince most men that when the organism is hedged round, as it usually is, by the products of inflammatory action, it is almost hopeless to expect to reach it either through the air passages or through the currents of the blood; what we have to do, after having prevented reinforcements from being poured in from the outside, is to combat the irritation and inflammation caused by its presence by ordinary antiphlogistic measures, and then to strengthen the bodily forces so as to enable them to deal with the invaders; our chief reliance must be placed upon means for reinvigorating the system, dietetic, hygienic, and medicinal. At the same time I would by no means discourage attempts to preserve adjacent structures and the rest of the body from attack; some of the inhalations most commonly used are probably of service in this direction, controlling excessive secretion and rendering the mucous surfaces generally more healthy. Certain medicines also taken internally may prove to have a preservative effect, though I should myself give precedence to such as have been proved to increase the body weight and to improve nutrition generally. At the Manchester Hospital for Consumption a series of observations has been carried on for some years upon the action of different drugs, but it has been somewhat difficult to discriminate between the effects of these substances and the general good influence of the hospital itself. It was found, however, that pure oxygen, when ozonised up to 9 or 11 per cent., might be inhaled in considerable quantities without exciting inflammatory action, and it was administered regularly to fifteen patients in all stages of the complaint with very marked results, procuring improvement in general health, better appetite, sounder sleep, freedom from fever, and consequent gain in weight; it had, however, no obvious germicidal action. All attempts hitherto made to discover an anti-bacillary vaccine have signally failed, and it is hardly likely that they will prove successful against a complaint in which one attack confers no immunity against a second. Hitherto the best results that have been obtained in the cure of consumption have been due to abundant supplies of fresh air and light, to good food with a large allowance of fat in an easily assimilated condition, and to medicines that have assisted the general nutrition of the body. But if the question were to be addressed to medical men as to what single measure has done most towards the cure of consumption, I believe the answer would be almost unanimous in favour of change of residence; and though some of the good may be due to change of climate, I venture to ascribe a large proportion of it to the simple fact of removal from an infected area to places where the air is free from active poison, and hence I am at one with those who believe that healthy homes for consumptives may be found in this country.

I have made these few remarks in the belief that it is preferable to state plainly the convictions that have grown upon me in the course of a practice during which diseases of the lungs have long been especially the object of my study. From a review of the course of this complaint in the past and of its affinities with other preventable disorders, from our knowledge of its pathology and of the influences most favourable to its spread, from our experience of its steady diminution in the last thirty years, and from the brief *résumé* of the measures that may be taken to arrest its course—from all these points we may surely learn to regard it as a preventable disease, and may look forward to its further diminution, if not to its ultimate extinction as a cause of death.

Clinical Lecture

ON

THE TREATMENT OF TYPHOID FEVER BY PROLONGED IMMERSION IN WATER.

Delivered at the Northern Hospital, Liverpool, on Nov. 16th, 1889,

BY JAMES BARR, M.D.,

PHYSICIAN TO THE HOSPITAL.

(*Concluded from p. 635.*)

THE TANK.

THE tank consists of a well-made wooden box, 6 ft. long, 2 ft. 10 in. wide, and 12 in. deep. It is lined with lead, which is painted white, and coated with a thick layer of shellac varnish. The shellac makes the tank, on other occasions, a convenient medium for administering electric baths. Each tank is provided with a large discharge pipe, which, in the case of these tanks, communicates with a soil pipe which leads down to the sewer; we can thus empty the tank containing seventy gallons of water in three minutes. During the treatment of the first six, and partly the seventh case, we had only one tank, which was supplied with an ordinary tap, and hence the cleaning each day was a rather slow process, and the patient was out of the water longer than was desirable. Moreover, having only one tank, each patient had to make room for his or her successor, and hence the period of immersion was not so long as I could have wished. We have now got two tanks in the ward, provided with a plentiful supply of hot and cold water and

good discharge pipes, so that the labour of the nurses is considerably lessened. Each tank is provided with a sheet of bed ticking, which would about allow the patient to be submerged, but at the head there is a strip, about a foot wide, which does not sink so deeply, and on which rests an air pillow so as to keep "the head above water," which is a very essential matter in most conditions of human life. The patient is wrapped up in a blanket and completely immersed except the head. It is important to use a blanket for this purpose rather than a sheet, because frequently a small portion of the chest rises above the water, and the blanket being a bad conductor of heat, this portion of the surface does not get chilled, which would happen if a sheet were used. The tank is covered with a half lid, which prevents the weight of the bedclothing resting on the patient, a waterproof sheet, and bedclothing to keep in the heat of the water. The tanks could easily be provided with a small circulating boiler to maintain a uniform temperature, but this is quite unnecessary, as we have found that the removal of a bucketful of tank water, and the addition of the same quantity of hot water every two hours, is sufficient to maintain a fairly uniform temperature, and a variation of one or two degrees is a matter of no moment. A thermometer is kept constantly in the tank. As long as the patient's temperature is over 100°, the temperature of the tank need not rise above 90° to 93°; but as the body temperature approaches the normal, so should the tank temperature. We have not found it necessary to lower the temperature of the water below 90° nor raise it above 98°. A rise of a few degrees in the tank temperature is sure to send up the heat of the body, though to a less extent, and by regulating the heat of the water there is no fear of any collapse, as the temperature of the body cannot fall below that of the surrounding medium.

I have been anxious that these patients should be disturbed as little as possible, and so have enjoined them to pass their urine and fæces into the tank. The fæces are to a considerable extent retained in the blanket, and this is soaked for some days in a strong solution of perchloride of mercury and hydrochloric acid before being washed. A fresh blanket is used each day. I know this is not a very æsthetic proceeding, and it would be a very simple matter in cases where there was not much diarrhœa to swing the patient while his bowels were being moved. In this case there would require to be a second sheet over the bed ticking, with a hole in it for the buttocks. Where there is much diarrhœa, or where there is incontinence of fæces, as happened in some of these cases, I still think that the less the patient is disturbed the better. Any day on which there was no motion the tank was not cleaned. So far as the patient is concerned, plain water of a given temperature is all that is required; but for the sake of others it is as well to have it as antiseptic as possible. At first I simply used boric acid, but latterly, for several reasons partly assigned under the sixth case, I have tried to render the water aseptic. This patient developed the disease in hospital, but after a careful and impartial investigation we were convinced that he must have contracted it outside. We used sulphate of iron with a small quantity of sulphuric acid; but the iron oxidised, and the water was rendered so dirty in appearance by the red oxide that we discontinued it. We then tried perchloride of mercury, with chloride of ammonium and hydrochloric acid; but this began to mercurialise the patient, and so had to be discontinued. Those who are fond of inunction in syphilis might find this a very convenient method for introducing the mercury. Dr. Logan made some cultures from the fæces contained in the mercurialised tank water, and he reports, *inter alia*: "But undoubtedly a very large proportion of the germs in the first case were dead. You might look upon the water as sewage water, but sewage water in which there were actually fewer germs than there would be in the same quantity of tap water." We also used boric acid, common salt, and hydrochloric acid; but this mixture irritated the patient's skin. Possibly, if the patient's skin were well protected by a coating of some mineral fat, such as vaseline, a strong antiseptic might be used. This question requires solving; probably it will be found best in the majority of cases to raise the patient above the water while the bowels are moved. In the ward there is a large supply of perchloride lotion (1 in 2000) for nurses and others to wash their hands after handling the patient.

Diet.—These patients have been kept chiefly on a milk diet, not that I have unbounded faith in milk, but it is a simple popular diet for such cases, and I was anxious that we should be able to estimate the value of the tank with as few disturbing influences as possible, either from diet or medicine. Dr. Lauder Brunton does not approve of farinaceous food in typhoid fever, as on several occasions it seemed to him "to afford a more favourable nutrient medium to the bacilli." Whether this be the result of more than a limited experience I cannot say, but I know men who have had largely to deal with this disease and who do not hold such an opinion. No doubt, when the salivary and pancreatic secretions are much diminished, ordinary farinaceous diet is not advisable until it has been subjected to the amylolytic action of some of the many ferments in the market; but in the tank these secretions do not seem to be much diminished, and the patients digest boiled bread-and-milk very well. I am convinced that in febrile diseases, if we wish to lessen the increased combustion at the expense of the tissues, we must supply a fair amount of carbo-hydrates. The best diet to prevent the wasting in typhoid fever has not yet been determined.

Alcohol.—None of these patients had any alcohol during their residence in hospital. My views on this question are no doubt to a great extent a reflex of the teaching of my friend and master, Professor Gairdner; but, not being a teetotaller myself, I am not likely to be accused of any prejudice on the subject, though any prejudice based on the matured opinion of such a careful and accurate observer as Dr. Gairdner could not be far astray. Alcohol is not a food in the proper acceptation of the word; it is a sedative, or, to use a commoner though less accurate designation, a stimulant. It causes vaso-motor paresis, which is usually sufficiently accomplished by the fever poison without any assistance; this effect may be necessary during the chilly stage, during collapse, or to counteract the effect of a cold bath, but in a well-managed case without any heroic treatment such influence should not be often necessary. In the case of patients accustomed to alcohol it may not be well to disturb any long-acquired habit; but this disease generally occurs in the young before any such habit has been established. During convalescence it may be, and no doubt often is, useful both for the stomach's sake and to relieve an exhausted heart by lessening peripheral resistance. We frequently hear of patients being "kept alive" for a certain number of days on brandy, but as these cases generally end in death it would perhaps be more accurate to say that the only nutriment they had during the last few days of life was diluted brandy. The tenure of life held under such conditions is usually dearly bought.

Medicine.—These patients had very little physic. When there is constipation calomel in small doses is perhaps the best purgative. I am a firm believer in the value of intestinal antisepsis, and formerly used salicylic acid suspended in milk; but since Rossenbach introduced naphthaline in this disease I have been in the habit of prescribing it chiefly on account of its very slight solubility. The tank in no way interferes with any other treatment which may be deemed advisable.

EFFECTS OF TREATMENT.

1. *Temperature.*—We are not here discussing the intimate nature of fever. Those who wish to do so will find much original work in the writings of Professor Wood of Philadelphia, and in the Gulstonian lectures of Dr. MacAlister there is an excellent epitome of current views on the subject, with a good working hypothesis as to the mechanism of the pyrexia. Increased temperature is a natural phenomenon of fevers, and it is a disputed point how far its mere reduction is beneficial; but the general consensus of opinion attributes to high temperature the power of working mischief irrespective of its origin. So long as the fever is mild there is no necessity for interfering with the temperature, and in any case there is more to be lost than gained by attempting to produce any continuous apyrexia. With the patient in the tank the body heat is to a great extent under command; but, so far as the temperature is concerned, I have made no attempt to do more than moderate the fever. I have noticed again and again in the Weir-Mitchell treatment that, so long as the temperature in the axilla does not exceed 100°, tissue upbuilding is easily effected, but once the body heat much exceeds this the massage should be stopped and the diet lessened, or, in other words, damp your furnaces and lessen your fuel. So in fevers the anabolic changes play a small part in the tissue metamorphoses, and hence we get rapid wasting. Life implies change, and the

greater the change the greater the vitality, so long as the anabolic changes compensate the katabolic; but in fevers the increased combustion of the tissues tends in the direction of their death rather than their renovation. In the continued fevers with a persistent high temperature and no marked intermissions there is no period for upbuilding, and hence it frequently becomes a question how long will the vitality of the patient hold out. It is therefore very important to moderate the intensity of the pyrexia, and, if possible, have a prolonged daily remission with a reduction of the temperature to at least 100° or 99°. If the reduction of temperature be accomplished by a mere abstraction of heat without any diminution in the production, there cannot be much gain. We want a true antipyretic action where the thermogenesis is diminished, the thermolysis regulated, and the thermotaxic mechanism improved. This is what, I am convinced, the tank accomplishes. There has been no attempt to prevent the usual evening exacerbation, but this is gradually lessened in intensity and duration, the remission becomes greater and longer, and the mean daily temperature is lowered, while when the patient is daily removed from the tank there steadily appears a diminished tendency to disturbance in the thermotaxic mechanism. I hoped to have been able to give some evidence of the tissue changes by an examination of the excretions in the tank, but I soon found that the sources of error were too great to make this laborious process worth attempting. I will again refer to this under the weight. The sixth case was an exception to the dictum of Wunderlich: "When the temperature is 40° (104°) from the first or second day of the attack, the disease is not typhoid fever." In this case, the evening temperatures of the first, second, third, and fourth days were 104°, 103°, 104·6°, and 104·2°, while the morning temperatures of the second, third, fourth, and fifth days were 101·8°, 101·2°, 101·4°, and 102°. From this time till the evening of the eighth day, when he was placed in the tank, there was a continuous fever between 103·2° and 104°. Independently of the dysentery, this was the most severe case of typhoid fever, not even excepting the fatal cases, which I have ever seen. The eighth case was only admitted to hospital on the seventeenth day of the disease. She was in a feeble condition, with a pulse of 144, and a temperature of 104·4°. She was placed in the tank at 95°, and her temperature fell about 2°. On the morning of the nineteenth day Dr. Wallace found that her temperature had fallen to 98°, and she appeared rather livid and collapsed. It seemed as if the blood was not warm enough to stimulate her exhausted heart. He removed her from the tank and applied hot bottles to her surface, and the lividity quickly disappeared. She was then ordered a mixture of caffeine and belladonna. The nurses should keep a careful supervision over both the temperature of the patient and of the tank.

2. *Circulatory system.*—There is a marked improvement in the vaso-motor tone; the bloodvessels become smaller and firmer; the pulse slower, fuller, and of improved tension—of course you must not mistake the small firm pulse for a weak pulse. The heart maintains its vigour, and the only cases where the sounds have been dull have been those cases where the patients were not put into the tank till a late stage of the fever; but in no case have I had any fear of cardiac paralysis, not even in the dysenteric case with a pulse of 152. Of course there might be a danger in placing a patient in the tank at the end of the third week with an exhausted heart, as the weak organ might not then be able to cope with the increased peripheral resistance. *Cæteris paribus*, the greater the resistance the less the frequency of the pulse; but when the resistance almost overtops the reserve cardiac force the frequency again increases. Such was the case in the dysenteric patient, and he then received tincture of belladonna for a few days. The first case was placed in the tank at the beginning of the third week, his heart was exhausted, and he was much benefited during convalescence by caffeine; probably the addition of belladonna or alcohol would have been useful. There was no hæmorrhage in any of these cases, and I am inclined to think that the tank lessens the liability to that complication, because, without doubt, the improved vaso-motor tone extends to the abdominal vessels, as shown by the lessened diarrhœa, the diminution in the distension of the abdomen, and the rise in the arterial tension.

3. *Respiratory system.*—The respirations lessen in frequency; the bronchitis and congestion of the lungs improve and soon disappear. In the third case both lower lobes were almost solid from hypostatic congestion, and the heart's action was very feeble. Under ordinary circumstances I would have prescribed caffeine and ammonia for this patient, but I was anxious to first elicit the effect of the tank, with the view of deducing its probable influence in pneumonia; and I have been so fully satisfied in this respect that the first severe case which comes under my care shall be treated in the tank.

4. *Digestive system.*—The improvement in the digestive tract is, perhaps, more marked than anywhere else. The tongue becomes moist and clean, the salivary secretion increases, the appetite and digestion improve, and the diarrhœa not only lessens, but the character of the motions changes for the better. In the fourth case the diarrhœa alternated with the two periods of immersion; and in the dysenteric patient the diarrhœa, which had quite ceased towards the end of the period in the tank, again returned, to a certain extent, after his removal. The lessening of the diarrhœa and the prevention of collapse, when the temperature of the tank is maintained, would suggest it as a medium for the treatment of Asiatic cholera. In this case the temperature of the tank would require to be kept at 98° to 100°, and possibly higher in the algide stage.

5. *Nervous system.*—The delirium disappears and the general well-being of the patient greatly improves. Cases 3 and 4 were sufficiently roused up from their lethargic condition to enable them to express in no uncertain sounds their dislike of the water. The decided beneficial effects of the second immersion in each of these two cases spoke strongly in favour of the tank. We have already referred to the increased vaso-motor tone, and the very heightened neuro-muscular irritability in many of these cases made us at first think that the tank might have too stimulating an effect on the nervous system. In the first and second cases the knee jerk was only tested at a late stage of convalescence. In the third, fourth, fifth, sixth, seventh, and eighth cases there were markedly exaggerated knee jerks and ankle clonus, but in all the convalescent cases the clonus has disappeared, the knee jerk has been reduced to normal, and in the fourth case it is nearly absent. The fourth case was not taken out of the tank on account of the meningitis, as over two years ago I had a very successful case of cerebro-spinal meningitis, following insolation, treated in the tank. The best remedy for meningitis, in my experience, is the ice cap while the temperature is above normal, and this could not have been well applied on this case in the tank. There is no disease where improved vascular tone is more demanded, and this is accomplished by the tank. Regarding internal medication, of course the immediate condition of the patient must be treated, but as a general rule I prefer a calomel purge, followed by a combination of salicylic acid and Dover's powder. In the early stages of this case there was a question of diagnosis between typhoid fever and tubercular meningitis; the absence of the rash and knee jerks told in favour of the latter; the bronchitis did not decide either way, but the characteristic typhoid stools and distension of the abdomen settled the question in favour of the former. The knee jerk and ankle clonus afterwards became very pronounced, though they slowly lessened during the progress of the cerebro-spinal meningitis. A friend suggested that possibly the tank may have given rise to the otitis and the otitis to the meningitis. This theory was bound to receive due consideration, though I still held to my opinion that these conditions were very rare complications of the fever. The otitis started and ended in the middle ear without any affection of the throat or external ear. Although the cerebral condition was somewhat relieved by the discharge of pus through the perforated drums, it did not subside with the healing of the ears, and the spinal mischief was in no way affected. When the patient was put into the tank a second time her cerebro-spinal as well as her general condition greatly improved. The neuro-muscular irritability in typhoid fever has been fully investigated by Dr. Angel Money, and I can refer you to his paper in THE LANCET of November, 1885.

6. *Urinary system.*—The urine was passed into the tank, and very few observations were made in any case. I had hoped to have made a quantitative estimation of the amount of urea in the tank, but this was found to be impracticable. The albumen disappeared in the second and fourth cases.

7. *Weight.*—The first three cases were not weighed before being placed in the tank. The net weight of the fourth case on admission to hospital was 43 lb., and during nine days

(seven of which were spent in the tank) she lost 7 lb. During the second period of four days in the tank she gained 1 lb. The net weight of the fifth case fell from 97½ lb. to 92 lb. during six days in the tank. In the sixth case the net weight fell from 115 lb. to 95 lb. during the first twenty-seven days in the tank, and during the remaining four days he gained 3½ lb. In the seventh case the net weight fell from 127½ lb. to 117½ lb. in ten days. The loss of weight in these cases has been very considerable, but the wasting did not appear so extensive as I have previously seen it in severe cases of typhoid fever. I hope in future, with improved dietary, that the wasting will be much less.

8. *Skin.*—The horny layers of the palms of the hands and soles of the feet get quite macerated, but on the skin of the body generally there is very little effect, with the exception of a slight roughness and elevation of the papillæ.

9. *The tissues generally.*—There is marked diminution in the dehydration of the tissues, which takes place in all febrile conditions. This is very apparent in the case of the tongue, which maintains its proper size and keeps moist. I know that a great many eminent authorities state that there is a retention of fluid in the system during the febrile process. There is an intra-vascular retention, especially in the veins, to fill up the paretic vessels; but a retention in the tissues is quite inconsistent with a high temperature. Dropsical conditions follow the fever, and are associated with a feeble circulation. The intra-vascular retention hampers the action of the heart, whereas the improved vascular tone and tension associated with the use of the tank diminishes the bulk of fluid in circulation and increases the action of the heart.

Such, gentlemen, are the effects which you may hope to derive from the use of the tank in typhoid fever. It is not a specific for that or any other disease, but it is a specific treatment for the patient; by placing him in an improved environment his system is better able to adapt itself to and overcome the altered conditions attendant on the fever. You may say that the number of cases is too limited to draw conclusions, but if I can only induce you to put the method in practice we will soon accumulate a sufficient number of cases to satisfy the most ardent Baconian. Inductive philosophy is all very well in its proper place; it helps us to take stock of our progress and to remove any excrescences which may have grown on our theories; but, so far as I am aware, no advance either in science or anything else has ever been effected by this process of reasoning. If the advantages of the tank had not been apparent to my senses I would have discontinued it long ago, without waiting for the accumulation of statistics. This is essentially a method of treatment for severe and moderately severe cases; all or nearly all mild cases get well with little or no treatment except that of rest in bed, with a regulated diet. You can see such a case in the hospital at present under my care, which has not been in the tank although there was one vacant during the progress of her disease. This treatment has met with the approval of my colleague, Dr. Dickinson, senior physician to this hospital, to whose valuable opinion I attach much importance. Dr. Wallace, who has had the active care of the patients, says that if he contracted typhoid fever he would be treated in the tank, and I believe his opinion is shared by many others. As for myself, I have been so often "in hot water" that I should take very kindly to it.

PAROXYSMAL HURRY OF THE HEART.

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(*Concluded from p. 642.*)

CASE 2. *Sudden cardiac pain; collapse; pulse 250–300; relieved by nitrite of amyl; no murmur at time; extreme morbus cordis found on recovery; history of syphilis and fever; two previous attacks eight years and six years ago respectively.*—William Y——, aged thirty-two, a commercial traveller, was admitted into St. Bartholomew's Hospital almost in a condition of collapse, and with a pulse which numbered 300 beats in the minute. The attack came on suddenly on the morning of admission. He became faint at 11.30 A.M., had much pain in the præcordium, in the back between the shoulders, and down the left arm. Some brandy was given him, but it did him no good. On admission, he complained greatly of the pain, was almost collapsed, extremely pallid, looked and felt faint, and was in a condition of considerable mental excitement and distress. He was unable to lie down, but could rest only in the semi-recumbent position. The respirations were not hurried, 18 in the minute, and there was no dyspnœa. The pulse could hardly be counted; at first the beats were over 300, but the rate varied a little from 250-300. The beats at the wrist were regular, but quite distinct, though feeble and small. The patient made no complaint of palpitation, and did not seem to know what was the matter with him, except his heart was going very fast. The cardiac dulness was a little increased, and the apex displaced to just outside the nipple line in the fifth space. The right border did not extend beyond the left edge of the sternum. The sounds were clear and there was no murmur audible or any friction. A capsule of nitrite of amyl was administered, with the result of relieving the pain at once, and ten drops of tincture of digitalis with ten drops of laudanum were given at once and repeated at intervals of four hours for three doses. The heart gradually quieted down, and at 8.30 P.M. was not beating more than 88, with steady forcible beats, though not quite regular. The slight dilatation had subsided, and a systolic murmur became audible over the whole præcordium, but not propagated into the axilla. It was heard also at both bases, but chiefly behind the sternum, and here it was propagated towards the right clavicle. This was the end of the attack. The patient was kept in the hospital for nine days, during which time there was no recurrence. The pulse varied from 76 to 84, and was usually regular and full, but was easily hurried by excitement. The only medicine given, after the attack had passed off, was some iron and nux vomica. By Feb. 4th the murmurs, which had been gradually becoming audible, proved to be two, one at the apex, audible also in the axilla, and occasionally faintly at the angle of the scapula; the other at the right base, and propagated upwards into the neck. Both murmurs were systolic in time, and no diastolic murmur could be detected. The patient regained colour somewhat, but when he left at his own request he was still pale and anæmic. He did not return, though he promised to do so if further troubled, from which we may conclude that he has suffered no further inconvenience. His previous history was this: The present was the third attack of this kind, the first coming on without any reason that he could give eight years ago. The attacks lasted for a few months, coming on at irregular intervals, and lasting only for a short time, similar in character to the present, but not so severe. He remained free then for about eighteen months, when he came under my observation, and after four weeks recovered. Since that time he had no return until the present attack. He had never had rheumatism, gout, or chorea, and, except for measles when a child, had been perfectly well. He had had gonorrhœa, but never syphilis, and there was no history of similar affections in any near relative. His breathing was good even on exertion, and he was capable of considerable effort without suffering from pain or palpitation of the heart or any other discomfort. By occupation he was a commercial traveller, and drank freely, though not to great excess. There had been no unusual excitement or worry to determine the attack, which seemed to come on quite at random and without warning.

In this case a single paroxysm of about nine hours' duration constituted the whole attack. But the first attack, eight years ago, had continued over several months, and the second over four weeks, so that the attacks appear to be getting less severe and less frequent. Morbis cordis proved to exist after the attack was passed, both the mitral and aortic valves being probably affected. I would draw attention to the possible history of syphilis in this case, as it is also present in one of Dr. Bristowe's patients, and may suggest the nature of the lesion in some of the cases. The effects of nitrite of amyl and of digitalis have also their importance in considering the pathology of the affection, as I shall show later. This patient also got well and returned to work.

CASE 3. *Sudden attack of severe palpitation and pain brought on by hurrying; pulse very rapid; respiration also rapid; no murmurs or other evidences of morbus cordis; respiration rapid for some time; pulse, except during attack, slow, due to digitalis probably; strong hysterical history; complete recovery.*—Nurse G——, aged twenty-six, while

hurrying back to the hospital from church on Sunday, April 7th, was seized quite suddenly with violent pain near the heart running down the left arm. It seemed to take away all her breath, and it was only with the greatest difficulty that she succeeded in getting upstairs to her room. Her breath seemed almost to stop, and she felt as if being suffocated. Though she retained consciousness she felt dizzy and thought she was dying. The house-physician, who was at once summoned, found her greatly distressed, very pale and anxious, restless, but not sweating. She was breathing rapidly and panting, and could only speak in gasps. The pulse was regular, but beating so rapidly that it could not be counted at the wrist; the artery was distended though the pulse wave was small. The vessels in the neck pulsated distinctly, but though the apex of the heart was displaced a little, no murmur could be detected. She appeared so ill that the greatest alarm was felt about her, but after the administration of brandy and ether with a little opium, and the inhalation of some nitrite of amyl, she rallied, the pulse and breathing quieted down, and the attack slowly passed off, leaving her extremely weak and prostrated. Ten drops of tincture of digitalis with some ether were ordered to be taken every four hours. During the night she slept but little; she was unable to lie down, and was not comfortable unless the shoulders were propped up and the head supported by pillows. She was very pale, but had lost her anxious expression. The respiration was laboured and still rapid, 36, but the alæ nasi did not dilate, nor was there much dyspnœa. The pulse was 78, and a little irregular. The apex of the heart was felt in the fourth space just inside the nipple, and the cardiac dulness was increased upwards to the third rib. The impulse was natural, no thrill was found or any murmur heard. The temperature was normal. The patient still complained of pain, but it was not severe, and more an ache than an acute pain. A small injection of opium was prescribed to give her sleep, and the following mixture administered every three hours: Tincture of opium five minims, spirit of ether and aromatic spirit of ammonia of each ten minims; to an ounce of chloroform water. The patient slowly improved, and by the 13th had lost all pain, but during this night she was alarmed by one of the patients, and the pain returned enough to prevent her from sleeping for the rest of the night. On April 16th she was, by her own urgent request, allowed to be moved on to a chair, but the simple movement brought on an attack of dyspnœa and cardiac pain, which lasted through the night and into the next day. On the 24th she was again moved on to the couch, and bore it well until she moved to get back into bed, when the exertion brought on another slight attack. The next morning the respirations was 50 and shallow, but the pulse only 70. The temperature throughout was subnormal. Henceforth one day was very much like another. As long as she lay still in bed she was free from pain, but a very slight effort or excitement caused it to return. The respiration was accelerated from 40 to 50 in the minute, and though the pulse was not when at rest above 80, exertion or excitement at once caused an increase. On May 6th this note was taken: The patient looks less anæmic, but the respiration is still rapid and somewhat panting; the cardiac dulness is still slightly increased upwards, and the apex cannot be exactly fixed. No murmur is audible, but the sounds are everywhere feeble and the action easily excited. Fifteen drops of tincture of perchloride of iron with five of tincture of belladonna were given three times a day, and a dose of opium or a small hypodermic injection was necessary at night from time to time. On the 16th the patient tried to walk a few steps, with the result that a severe attack of pain came on which was only relieved by ten drops of digitalis and an injection of morphia. The digitalis seemed on this occasion, as on others previously, to reduce the pulse-rate very rapidly, and the next morning the heart was beating only 58 and slightly irregular; the respiration was still rapid—viz., 44. A few days later the belladonna was replaced by five drops of digitalis, which was now tolerated, and seemed to do good. On the 25th the patient was allowed to go home to be nursed upon her own and her mother's request. I saw her again three months later. She had had no return of the attack, and, though not looking robust, seemed in fair health. She went back to nursing, and has continued, I understand, in active work since. I have to-day (March 10th) heard that she has recently been very dangerously ill again, but the nature of her illness I have not ascertained for certain, but it seems probable that it is a return of the old affection.

The family history was not good; neither father nor mother was strong The father died of cancer at sixty-eight, and there was phthisis on both sides. The patient is one of eight children, of whom three died young, and one is mentally defective. The patient has never been strong; at eight she had scarlet fever; at fourteen pleurisy; at twenty-one she had rheumatic fever, which kept her in her room nearly the whole winter, and during which attack she suffered much from pain in the left side, but a pain of an entirely different kind from that in the present attack; a year later she had scarlet fever for the second time, which was followed by nephritis, from which she slowly recovered, and in the Christmas of the same year she fell a victim to typhoid; this she regarded as the worst illness of all, for she remained pale ever after, and for months was in a state of low nervous exhaustion, for which she was a patient in St. Thomas's Hospital, and was cured by massage. She gradually became stronger, and continued in fair health till she came to be a nurse in the hospital in January of the present year. Shortly afterwards she fainted twice, from overwork and over-anxiety she thought, and was troubled with a little shortness of breath at times on exertion. Except for this she continued in good health until the present attack, before which for a few days she had not been feeling well, but she attributed this to the extra fatigue and anxiety of night duty.

This case appears to fall into a somewhat different category from the others, inasmuch as, except during the attacks, the pulse-rate was slow, below the normal; while both during the attacks and between them the respiration-rate was always above normal. Something of the slowness of the pulse must, I think, be put down to the influence of digitalis, to which the patient seemed extremely susceptible. In considering the rapidity of the respiration the strong hysterical history must be borne in mind. The patient was at the time very emotional, but clearly suffered much real discomfort and alarm from the attack of palpitation, which I did not feel at all justified in referring to hysteria, except perhaps in the most indirect way.

The affection is one of the middle period of life, for out of the twelve cases recorded by Dr. Bristowe and myself ten occurred between the ages of twenty-five and fifty. The liability of the two sexes is the same. The chief interest of this affection centres, of course, in the question of its nature—that is to say, whether it depends upon an organic lesion of the heart or not. A nervous affection it certainly must be, but the question is whether this nervous irritability is itself due to organic disease of the heart. Dr. Bristowe concludes that it is not, and describes it as a functional disease, a conclusion which was supported by the only post-mortem obtained. Still, it seems to me that there is a good deal to be said on the other side. In the first place, extreme rapidity, such as is met with in these cases, is very rare in ordinary palpitation, and in exophthalmic goitre, where palpitation and rapidity of action are so common, it is most unusual for signs of cardiac failure to develop in the way that they developed in so many of Dr. Bristowe's cases.

Now, in one of Dr. Bristowe's cases and one of mine there was distinct evidence of antecedent valvular disease. In another case of Dr. Bristowe's the patient, a lady aged forty-nine, was only four weeks ill and died. This case reads to me very much like one of acute myocarditis, such as I recorded some years ago, and I think we might fairly presume, in the absence of evidence to the contrary, that the heart was not sound. Another case occurred in a patient of sixty-five, so that the possibility of cardiac lesion in connexion with atheromatous vessels cannot be excluded, although it is true that this patient was remarkably active three weeks before his illness. Of the remaining eight cases two died of gradual cardiac failure with the usual symptoms, and one suddenly, apparently of cardiac syncope. One of Dr. Bristowe's patients and one of mine referred the commencement of their attack to a strain.

If there be a heart lesion, the next question that arises is as to its nature. It is clear that no valvular lesion will account for the affection. It remains, then, that it must be a lesion of the myocardium. As I have already said, one of Dr. Bristowe's cases reminds me very strongly of the cases of acute myocarditis I recorded some years ago, for in them also the pulse was very rapid, and there was the same susceptibility to the action of digitalis, which was noticed in two of the present cases. It is, of course, very difficult to diagnose, or indeed to exclude, affections of the myocardium; but it

is remarkable that in several of the cases there is a history which would explain such a lesion if it were present. Thus the first and third of my patients had had rheumatic fever, and the second probably syphilis; while two of Dr. Bristowe's had also had syphilis. For these various reasons I am inclined to the belief that the cases of paroxysmal hurry of the heart are not due to functional disturbance alone, but to an organic lesion, and that that lesion is in all probability in the muscular substance. It may well be in some cases a form of chronic interstitial myocarditis, consequent in some cases on past rheumatic pericarditis, or in others on syphilis, being thus related to fibroid disease of the heart. I admit, of course, that proof is impossible, and that such a conclusion must at present remain a matter of opinion.

I have thought it well to bring these cases forward because there appear to be but few on record, though probably the affection is not so rare as might be supposed. Whether rare or not, they appear to me to constitute an important group to which less attention has been drawn than it merits.

Wimpole-street, W.

THE PREVENTION OF RABIES AND HYDROPHOBIA.

REMARKS ON CERTAIN PHASES OF THE SUBJECT.

BY SURGEON-GENERAL C. A. GORDON, M.D., C.B.,
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THE subject of rabies and hydrophobia has recently been considered in two very different aspects—namely, by the *National Review* for December, 1889, and by the *New Review*, Nos. 6 and 7, referred to in THE LANCET, No. 3459. The divergence of opinion thus shown to exist among capable observers and writers being absolute, it may here be well as a possible step towards a surer footing to allude briefly to some at least of the points in respect to which such difference is most pronounced. Opinions differ as to the existence of rabies as a definite and specific disease due to one particular cause, and to it only, or as an attendant condition in the course of various maladies. That the condition so described has in particular instances arisen idiopathically is attested by observers whose statements are beyond question. The reliability as a crucial test of intercranial inoculation as practised in Paris is by no means generally accepted; on the contrary, effects identical in character have followed similar inoculation from healthy dogs with innocuous matters and from the preliminary operation in the absence of any inoculation. That rabies has its periods of epizoötic prevalence and its periods of dormancy, or absence, is generally acknowledged. So also is the circumstance that these periods bear no apparent relation to the adoption or otherwise of measures specially directed against the condition or disease so named. The affection may be endemic—that is, limited to particular districts or localities, their conditions differing in no respect from those of adjoining localities from which it is absent. The ratio of animals affected after having been bitten seems to vary in different outbreaks and localities. Nor does the theory of specific poison and of germs in relation to rabies meet with unquestioned acceptance. The affection itself having yet to be proved specific in its nature, so the speciality of its products has to be demonstrated. With respect to germs, "we, as clinical investigators, will not follow the pathologists into finding micro-organisms in almost every disease, and in assuming that because a micro-organism is *post hoc*, therefore it is *propter hoc*."[1] Nor does M. Pasteur assert that he has discovered a special microbe peculiar to rabies.

Direct evidence that rabies is an infective disease is not forthcoming, and meantime analogy is opposed to the theory of its being so propagated. That hydrophobia in man is not the same affection as rabies in dogs may be taken as demonstrated by fully qualified observers. To assume, therefore, that the "poison" of the one affection would produce the other, or *per contra* protect against it, would be to believe that in the realm of disease the course of nature through all other departments of organic life was departed from, and "like" produced that which is "unlike." In his earliest experiments of inoculating rabbits with saliva of rabid animals, M. Pasteur declared that the resulting disease in the rodents was not true "rage." In that opinion he was supported by MM. Galtier and Vulpian, while M. Guérin gave to it the name of "la rage Pasteur," declaring at the same time that in the ordinary course of events rabbits never suffered from rabies. Subsequently the disease produced in them was variously described as "septicæmia" and "cerebro-spinal meningitis." Notwithstanding what has been adduced to the contrary effect, Friach and other capable observers assert that dogs inoculated in the laboratory have not proved refractory to "street rabies," and that those inoculated intercranially have seldom escaped with life. The latter method has no relation whatever to the manner in which rabies is believed to be conveyed by one dog to another. According to statistics furnished by M. Pasteur, out of twenty-five "vaccinated" dogs five died, equal to 20 per cent., and of five unvaccinated three died, equal to 60 per cent. But many dogs remain unaffected by rabies, even when hydrophobia virus has been injected into their blood, and the proportion which suffer from that affection as a result of bites, according to the *New Review*, is only a fraction over 3 per cent., as against the figures of M. Pasteur. But, as expressed by that *savant*, "experiments performed on animals are in their results contradictory of each other." Of the cases recorded as of hydrophobia, their characteristics differ among themselves. A large number of those so designated have, doubtless, followed bites by dogs, rabid and non-rabid, even when the part bitten was protected by clothing or other covering. But outbreaks of hydrophobia often follow those of rabies at such intervals of time as to indicate an absence of direct relation between them as cause and effect, and in a very considerable number of recorded instances hydrophobia has occurred in the absence of a bite or other physical injury. Besides these and various other circumstances adverse to the theory that the affection is due alone to rabic virus, it is contrary to experience in reference to the action of contagious poisons that the intervening period between inoculation and development of results should be so variable, and often so protracted, as it practically is in hydrophobia. Mental emotion and temperament also play important parts in respect to the occurrence of the affection, or, at least, a train of phenomena undistinguishable from it. In cases of wounded men, also, traumatic tetanus has simulated hydrophobia, and in certain recorded cases symptoms similar in character to those which have followed bites or other injuries have occurred in the absence of either.

Whatever be the theory in accordance with which the anti-rabic method of inoculation has been adopted, its practice is equally opposed to analogy. Variolous inoculation, originally employed in China, had for its object the communication of small-pox to the human subject while still young. But we now neither inject the virus of scarlatina nor of diphtheria. In vaccination the material used is in its nature specific, resulting from natural vital process; it is taken from the living subject, it produces specific results, and protects against an analogous but not identical disease. In the Pasteurian method so-called the material employed is the result of disease artificially produced by means of violence; it is taken from the dead body, and bears no relation in its nature or property to vaccine properly so called. According to the theory of germs and specific poison, either the material used as an antidote against rabies must be weaker than that which has to be combated, or it must be stronger. On the former assumption it is against experience to find the feeble overcoming the powerful. If the latter, it amounts to supplementing an already dangerous amount of poisonous material in the system by an additional quantity of poisonous material—a practice opposed alike to analogy and to reason. Moreover, neither is rabies of the laboratory identical with or analogous to hydrophobia.

From the circumstance that repeated changes in and modifications of the anti-rabic inoculation have taken place, it is practically impossible to appraise the precise value or otherwise of the several methods temporarily used. But, according to the report of the Special Commission, "deaths have occurred under conditions which have suggested that they were due to the inoculations rather than to the infection of the rabid animal" by which the person had been bitten. That the system of inoculation which bears his name was deemed by M. Pasteur to be unnecessary appears by a letter addressed by himself to Dr. Rigaut, dated Nov. 16th, 1884, to the effect as

[1] Brit Med. Journ., July, 1884.

follows:—"Les cautérisations que vous avez pratiquées doive vous rassurer pleinement sur les conséquences de la morsure. Ne faites plus aucun traitement; c'est inutile." In France, M. Guérin formulated the grounds upon which were based his objections against the method—namely, the results of M. Pasteur's own "experiments"; and a protest against the proposed institute in Paris, signed or supported by 115 medical men, was submitted to the municipal council of that capital. Various other objectors expressed strong opinions against the practice, with reference to which THE LANCET observed that "the anti-rabic inoculations of M. Pasteur are well meant, but chimerical" and "irrational in principle."

That "statistics" relating to the reported success of M. Pasteur's method of inoculation cannot from the nature of things be reliable is explicitly admitted in the report by the commission, and reasons given. On a recent notable occasion it was stated that of 7000 persons treated according to that method there were only 71 deaths. On the same occasion the circumstance was admitted that "100 out of the 7000 alluded to may have died"; while, according to published records not alluded to at that time, a list is given of 176 persons who died after having been so inoculated. Such discrepancies tell their own tale. Among the persons inoculated also a considerable number had never been bitten at all. Indeed, by M. Pasteur's own admission (*New Review*, No. 6) he was aware of the fallacy involved in his own "statistics." He considers that out of 100 persons bitten by rabid dogs fifteen to twenty will die, and eighty suffer no evil effects. To the sliding scale thus indicated the term "statistics" is inapplicable. But taking his figures as they stand, the results shown by them compare unfavourably with those obtained by other methods of treatment; for example, of 400 bitten by rabid animals and treated by Mr. Youatt not one died; of nearly 4000 bitten by rabid or suspected dogs treated by Mr. Earl, not one was known to have become affected with hydrophobia; and of 4256 cases of bite reported to have been treated in London hospitals there was no instance of that disease. On the other hand, in France, whereas in the twenty-five years prior to 1886 the average annual number of cases of hydrophobia was thirty, it has increased since that date to forty-three. On the subject of the muzzling of dogs as a means of preventing rabies, it is noted that in the instances adduced in illustration of the efficiency of that measure other measures have at the same time been employed, nor can it be said in such instances how far the cessation of rabies which has been readily assigned to them has been due to the natural decay of the epizootic of which it has been a characteristic or accompaniment. As to the expression at the present day in such common use of "stamping out" this or that disease, it implies a process to which analogy, reason, and experience are alike adverse.

Westbourne-square, W.

SERIES OF EIGHTY-FOUR CASES OF ABDOMINAL SECTION IN WOMEN.

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Statistics.—Mortality.—Details as to fatal cases.—Conditions for success.—Danger in use of antiseptics.—Mechanics of the abdomen.—Cure of sterility by removal of diseased ovary.—Three cases of intra-peritoneal hæmatocele.—Method of controlling serious hæmorrhage.—Stitch abscesses, their cause and prevention.

I. The eighty-four cases comprising this series of abdominal sections may be thus classified:—

Exploratory incisions	12
Removal of cystoma of ovary	12
„ pediculated parovarian cyst	2
„ intra-ligamentary cysts	4
„ sarcoma of ovary	1
„ dermoid tumour of ovary	3
„ papilloma of ovary	1
„ acute abscess of ovary	1
Total	24

Removal of appendages.

For myoma	11
„ chronic inflammatory disease without abscess	7
„ inflammatory disease with abscess of tube or ovary	8
„ prolapse of ovary and pain	1
„ septic perimetritis	1
Total	28

Opening and draining.

For papilloma of peritoneum	2
„ acute peritonitis	3
„ chronic peritonitis	3
„ suppurating hæmatocele	1
„ abscess of broad ligament	2
Total	11
Cholecystotomy	3
Gastrotomy	1
Radical cure of umbilical hernia	1
Anterior colotomy (Madelung's operation)	1
Cæcotomy	1
Liberation of intestine from strangulation by band or volvulus	1
Removal of extra-uterine pregnancy	1
Total	9

All of these cases have occurred in the usual course of gynæcological practice. The only cases not included in the list are operations on femoral herniæ for the relief of strangulation or the radical cure. Of these I have had five cases in women, with four recoveries and one death.

With but one exception all patients suffering from intractable abdominal or pelvic pain without physical signs of tumour have been encouraged to persevere with milder measures of treatment, and there is therefore only one case of this class of disease in the list which I submit. Several of these cases of chronic ovaritis and ovarialgia have improved beyond my expectation without operation, and to this happy result the administration of hydrastis and the use of galvanism have, apparently, largely contributed. Some have remained unbenefited by this treatment. These may be well divided into two distinct classes: (1) those who are essentially weak and hysterical only, and in whom all operative interference is to be avoided; and (2) those in whom the pain is due to a definite physical cause, but one that is difficult or impossible to find without an operation. In one or two instances of this class I have operated after prolonged watching for several months, and have found, as I expected, very decided lesions, but such as were altogether unrecognisable by ordinary methods of examination. Under these circumstances, the result of operation has been very successful, and I am convinced that much of the secret of wise gynæcological practice lies in the careful discrimination of the classes referred to. Facts and symptoms which may help us in such discrimination and separation I hope to refer to more fully at another time.

Of the eighty-four cases reported eight were fatal, showing a mortality of 9·5 per cent. No less, however, than five of these eight cases were operations undertaken under conditions essentially fatal. One was a case of septic disease following the use of a sponge tent. The operation may have retarded, but did not materially alter the pyæmic course of the disease, and the patient died four weeks afterwards from abscess of the lung. Another was a case of strangulation of bowel from volvulus or from some other cause that could not be determined. I found about eighteen inches of intestine, dark chocolate in colour. On very slight manipulation, whatever held it and obstructed its circulation easily gave way, and the whole coil of bowel, from sound intestine to sound intestine, was set perfectly free from any possible source of constriction. Although flatus passed after the operation, the bowel did not recover itself. Perhaps in a similar case it will be wiser to excise the part instead of leaving it. The remaining three cases were all instances of exploratory incision for advanced malignant disease. This will illustrate the observation that an exploratory incision in the later stages of any chronic, and probably lethal, disease, when the powers of life are low, is a somewhat dangerous operation. In cancer, in great emaciation from any cause, in leucocythæmia, and in some cases of tubercular disease, it is liable to hasten the fatal

termination. Of course, this may be said to be comparatively unimportant. In all these cases, if no operation had been performed, a few weeks at the outside would have marked the farthest limit to which each life could run. At the same time, it is a fact worthy of notice and ought to have its bearing on one's advice and practice.

Unfortunately, where there is diagnostic doubt the operation is often imperative, and it is not the surgeon's fault if the case is seen too late or no earlier opportunity is afforded him for its safe performance. Such was the position in two of the cases alluded to. In one cancer of the abdomen simulated a large ovarian tumour; in the other the diagnosis was doubtful between chronic abscess of the pelvis and malignant or tubercular disease. The third case lived to return home from the hospital, and perhaps might have been justifiably excluded from the fatal list.

This completes the detailed description of the five cases, which may be termed hopeless from the beginning. The three remaining cases may be briefly described as follows:—One was a case of removal of the appendages for chronic inflammatory disease, and post mortem she was found to have "double aortic disease, adherent pericardium, traces of old pleurisy on both sides, granular kidneys, and fatty liver." Another case was one of removal of an intra-ligamentary cyst. This patient died with perforation of the cæcum, the perforation, according to the pathologist, being situated posteriorly and nowhere near the site of operation. The final case to be considered was an ovariotomy; the patient died of peritonitis on the sixth day. The operation was easy and uncomplicated, and there must have been, I think, some method of septic contagion to account for death. None, however, could be traced, unless a case of puerperal peritonitis to which I was called in consultation some two or nearly three weeks previously was sufficient to account for the unfortunate and quite unexpected result.

The remaining seventy-six cases made good recoveries. Two of these died within three months: the one (a case of acute peritonitis from perforation) under circumstances fully described in a paper published in the *Birmingham Medical Review* for April, 1888; the other (a case of cæcotomy for complete obstruction), after some weeks of comparative comfort, died, so far as I could ascertain, from some further development of the morbid process causing the obstruction.

II.—The qualities and conditions necessary for success in operative work are various. Three qualifications, however, stand out as pre-eminently important—experience, cleanliness, and good drainage. This is true for all surgery, but each member of the triad has a peculiar value and significance in abdominal work. *Experience*, because it can only be gained to a limited extent by other than personal work, an important class of pelvic operations having to be done mainly "out of sight"; *cleanliness*, because the abdomen is specially sensitive to certain forms of micro-organism and impurity, and yet has wonderful power for cleaning itself when properly assisted; and *drainage*, because the conditions necessary for its successful employment in abdominal work are perhaps simpler, and at all events different from those required in other situations.

What constitutes true surgical cleanliness is not at first quite easy to say. Living as we do in an age when the reported omnipresence and activity of the baleful germ are only equalled by the number and potency of the methods used for its destruction, it is not surprising, perhaps, that many surgeons do all their work in conscious conflict with their invisible enemy. But, whatever general surgery may require, intra-peritoneal work emphatically teaches us, I believe, that, as regards the peritoneum itself, many germs, and especially those of the air around us—under ordinary conditions and for a limited period—are quite innocuous, while certain special germs and many antiseptics are distinctly hurtful. The general peritoneal cavity, in all but acute perforative and similar urgent conditions, is necessarily in a clean condition when the surgeon opens it. The main danger, therefore, lies in what he brings to it; and, apart from operative errors, the danger is an unseen one. To prepare the hands from the night before, by special washing and the use of strong sublimate solution—to see that equally careful preparation, according to the most approved methods, has been given to the sponges and instruments; but to bring to the operation itself no chemical source of danger—commends itself to my judgment as the wisest course to pursue. The use of antiseptics by the surgeon or the nurse should, therefore, be confined to a time preparatory to the section, while nothing but clean hot water is necessary or even advisable during the time the operation is in progress.

No one can be frequently engaged in abdominal surgery without becoming deeply interested in the special laws and conditions which separate this wonderful region from other portions of the body. The chief mechanism which governs the peculiarities not only of abdominal cleaning and drainage, but of many of the pathological processes of the peritoneum, is to be found in the yielding and muscular abdominal wall. This keeps the abdominal cavity always full. However large a tumour may have been removed, the walls fall in, the space is closed, the abdomen still is filled, and there is no resulting vacancy. If a drainage-tube be inserted in Douglas's pouch, still this same surrounding pressure, like the most perfect and delicate of bandaging, causes whatever fluid may be present to well up through the tube, and it is only for bleeding and when blood-clots form that suction seems absolutely necessary for removal. Similarly, when some solid substance is left within the peritoneal cavity, the walls and contents close accurately round it. If removable by the peritoneum itself, it disappears. If not, under favourable conditions, a local peritonitis results, and the substances become encapsuled or a local abscess forms. So perfect is this wonderful power of peritoneal adjustment that, as a rule, no opportunity is given for air to enter in. In fact, the whole abdomen may well be regarded as a large muscular bladder, of which the diaphragm, recti, and obliques are important constituent fasces or portions, situated outside the urinary bladder, but subject to very similar mechanical laws.

III. One of the most interesting cases in my series is the one of sarcoma of the ovary, for its after history raises a somewhat important question, *Does not removal of the appendages on one side sometimes prove a cure for sterility?*

The patient, A. K——, aged twenty-eight years, came to the hospital complaining of pain in the left side and leg, and of sterility. There was a history of one pregnancy immediately following her marriage seven years before. Since this date menstruation had been very scanty and irregular, and at times had almost disappeared. On examination I found a small round solid tumour in the position of the left ovary. As this was evidently the seat of the pain which seriously interfered with her household duties I advised the removal of the tumour. In consultation, however, there was considerable difference of opinion respecting the case, I holding that there was a tumour of the ovary requiring removal; one of my colleagues, on the other hand, regarded the case as one of chronic disease of the appendages which was undergoing a process of natural cure through the premature establishment of the change of life. In deference to this opinion I waited a few months; but, finding no alteration in the signs and symptoms and feeling very certain of my diagnosis, I admitted the patient to Spark-hill for operation. In consequence of the difference of opinion, a special consultation was asked for and held, in addition to that provided by the ordinary rules of the hospital. The majority of my colleagues agreeing with me, I operated on Nov. 26th, 1887, finding the condition to be as I expected. The tumour of the left ovary, together with its corresponding tube, was removed in the usual way. The ovary and tube of the right side, being normal, were not removed. On subsequent examination of the small ovarian tumour removed, it was pronounced by Mr. Bland Sutton to be a mixed-celled sarcoma. The patient made a good recovery, but the most interesting part of the case, to my mind, remains in her subsequent history. Shortly after her return home she became pregnant, and a few months ago was confined of a little girl. Both mother and child are doing well.

Three others of my patients who have undergone similar operations became pregnant shortly after convalescence, one case being an operation for acute abscess of the ovary, and the others ovariotomy cases, but in neither of these was there any marked history of previous sterility. Whether a diseased ovary may be a real cause of sterility and its removal be occasionally followed by pregnancy are novel questions which, I think, are worthy the consideration of any who have opportunities for forming a correct opinion.

Intra-peritoneal hæmatocele is a subject which has lately given rise to very considerable discussion and controversy. It is somewhat remarkable that three of my cases (close

together) afford different examples of this condition, but all alike in being limited by peritoneal adhesions.

The first appeared to be of traumatic origin. The patient received a beating from her husband about the abdomen and back, which was followed by disorder of menstruation and gradually increasing pain in the right side of the pelvis and abdomen. When seen, in consultation with Dr. Fitzpatrick, the symptoms were acute fever, peritonitic vomiting, and extreme pain, associated with a rapidly increasing tumour of the right side. On operation this proved to be a suppurating hæmatocele. The abscess cavity was full of fetid pus and broken-down blood-clot; its walls were formed by adherent intestine. The abscess was cleaned out and drained, and the patient rapidly recovered.

The second case was an extra-uterine pregnancy. It was evidently tubal in its origin, of about four months' duration, and had ruptured some time previously to operation. The fœtus and placenta with a large quantity of blood-clot formed a tumour on the right side of the pelvis, reaching some distance above the groin. This was limited above by adherent intestine and omentum, and to the latter some of the placenta had become attached. The whole of the pregnancy was removed, and the remains of the tube ligatured close to the uterine horn. The patient, who had very copious albuminuria at the time of operation, slowly recovered from this as convalescence was established, showing, I think, that the renal disorder was secondary to, and dependent upon, the abdominal tumour.

The third case occurred after operation for removal of a parovarian cyst. The patient was very faint for some time after operation, and it is just possible that some hæmorrhage may have taken place from the pedicle shortly after the closure of the wound, but I cannot regard this as very likely. She appeared to do very well until early on the morning of the third day, about forty-four hours after operation, when, the nurse being unfortunately asleep, she got out of bed, walked to the washstand, and took a copious draught of water from the ewer. After returning to bed acute abdominal pain and distension soon came on, and during the course of the day signs of peritonitis were marked. These slowly subsided during the course of the next few days, leaving, however, a well-defined tumour or swelling reaching above the pubes in front and distending the pouch of Douglas below. The temperature rose, and as the fever became severe and the retro-uterine tumour very marked and tense, the latter was aspirated, several ounces of what looked like pure fluid blood being thus removed. Only temporary improvement followed. Decomposition of the hæmatocele occurred, and a few days later I freely opened the pouch of Douglas, inserted a large glass drainage-tube in this situation, and washed out a quantity of decomposing blood and blood-clot. In doing this I passed my finger into the pelvis behind the uterus, and therefore knew that the hæmatocele was intra-peritoneal, although limited above by adhesions and shut off by these from the upper portion of the general peritoneal cavity. The drainage-tube was left *in situ*, and the patient slowly recovered, convalescence and good health being finally well established.

Two cases of the series gave me trouble from immediate hæmorrhage. In the one case I had to reopen the abdomen a few hours after operation, and use some perchloride of iron in order to stop the bleeding. This came from separated adhesions deep in the pelvis, and a ligature was insufficient to control it. The other case was one of acute pyosalpinx, sent to me by my old friend and colleague, Dr. Gilbert Smith, from the Skin and Lock Hospital. In this case the tissues were infiltrated and very friable; the broad ligament was torn close to the uterus at a great depth from the surface, and here the bleeding was profuse and serious. The source of the hæmorrhage could not be seen, but by grasping the remains of the ligament along the side of the uterus with large catch forceps the bleeding was at once controlled. The forceps were left on and removed some ten hours later with a perfectly successful result. If necessity arises I shall have no hesitation in using the same means another time, and I see no reason why this should not become a recognised practice in peritoneal as well as in vaginal and general surgery.

IV.—It would take up too much time were I to attempt to describe in any detail other cases on my list. Some of the more recent are examples of gastric and intestinal surgery, and I hope to report these more fully at a later date. In their after-treatment I have been greatly assisted, I believe, by the use of nutrient suppositories. These are valuable additions to our materia medica, and are likely to render great service in many cases of operation on the upper part of the intestinal track, where food by the mouth has to be withheld for several days.

In a recent record of work similar to my own the writer[1] finishes his subject by an expression of regret at the frequency of stitch abscesses. Several years ago, before I had begun to operate much myself this subject forced itself upon my attention, and has always interested me, so that I think I cannot do better than describe as shortly as possible the reasons which have led me to my present practice, by which I believe stitch abscesses are reduced to the minimum. In a rather extensive field of cases I noticed that the prevalence of suppurating stitches appeared to be very independent of the physique or condition of the patient, independent also of temperature and weather. They always tended to occur in groups, so that for some weeks, or occasionally even months, it would be rare to see a wound that had thoroughly healed by first intention only; while at other times case would follow case, all healing well, without a trace of abscess. The cause was, therefore, mainly, if not purely, a local one, and the facts I gathered pointed strongly to the infection of the residence, the silk, the needle, or the surgeon's fingers as the source of suppurative danger. Very soon after I began to operate myself, I discarded silk for silkworm gut in the suture of the abdominal wound. I cannot say that at first I had much better success with this than with the silk which previously I had always seen employed. A little later I discarded multiple needles for a single handled needle, with which the sutures of silkworm gut are passed. This I look after myself and always keep thoroughly clean. Then I began to wash my silkworm gut before I used it; and since this date I have enjoyed a freedom from stitch abscesses that has been very gratifying. The most important factor is, I believe, the use of the freshly washed silkworm gut. I dip the strands I am going to use in a basin of clean hot water, pass them through my fingers, and then use them directly in the suture of the incision. If, in spite of these precautions, a stitch abscess forms, it should be regarded as a danger signal, and the needle or fingers of the surgeon, or the place in which the operation is performed, should be suspected. There are grounds for believing that a succession of cases in which the incision heals badly may lead on to graver misfortunes.

Birmingham.

A CASE OF CHYLURIA, WITH PRESENCE OF FILARIÆ.

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THE following case, for permission to record which I am indebted to Dr. Dickinson, though agreeing in its main features with the classical descriptions of this disease, yet presents one or two points which, together with the comparative rarity of the complaint, render it of interest to the profession.

The patient, fifty-seven years of age, had for twenty years lived in the tropics. He had served as surgeon to a Ghoorka regiment, had been much in Assam, and finally settled for some years in the Ceylon tea district. During this time, though he had attacks of both ague and dysentery, his general health was good. In the part of Ceylon in which he settled chyluria and filariosis were not uncommon. In October, 1886, a fortnight before leaving Ceylon for England, he first noticed that he was passing chylous urine, and from that date to the time of his coming under observation at St. George's Hospital in July, 1887, the urine remained persistently chylous. His chief complaint was of difficulty in micturition caused by clotting of the urine in the bladder; he was frequently unable to pass urine without previous forcible kneading of the abdomen. There was gradual slight emaciation during this period with persistent, but not serious, diarrhœa, and a little dry cough. The patient was a spare man, not looking older than his years, and presented no apparent abnormality of viscera or enlargement of lymphatics; above the left clavicle, however, and just external to the sterno-clavicular

[1] Dr. Halliday Croom, Edin. Med. Journal, May, 1889.

joint, there was a distinct, dull, soft, ill-defined tumour, possessing what was probably communicated pulsation. A similar but less marked swelling was present on the right, and on both sides there was a loud bruit over the subclavian arteries. The external jugular on the left was slightly engorged. The left pulse was decidedly the stronger. The abdominal aorta was unusually prominent, and a bruit could be heard over it. He complained of pain down the left arm and in the epigastrium. The patient's condition remained very nearly unchanged during his stay in hospital, though he considered himself greatly benefited, as the urine ceased to clot in the bladder. The pains complained of down the left arm continued, but the hand and arm became anæsthetic, so that the patient cut himself, and allowed his hand to be severely burned, without his discovering it by any painful sensation.

The urine of each micturition was examined separately, but, unfortunately, lack of time prevented a complete chemical investigation. Under the microscope there was the usual finely granular base, with a few cells—no casts. The urine was generally acid, but occasionally alkaline, of very variable specific gravity—ranging from 1005 to 1033—and presented varieties of opacity, from a dense milk-white to the merest trace of opalescence. As a rule, the urine passed between 1 A.M. and 8 A.M. was much the least turbid; food seemed to increase the milkiness. Cod-liver oil, which was administered for a short time, produced a very decided increase in the opacity of the urine. Some specimens clotted spontaneously, while others remained fluid; there was no relation between the tendency to coagulate and the opacity. On one occasion a dead filaria was found in the urine.

The blood was examined at very frequent intervals for a long period for filariæ. While the patient was living the ordinary hospital life filariæ were found in blood drawn between the hours of 7 P.M. and 5 A.M. The period of maximum frequency was about midnight. On one occasion the organism was found in blood drawn at 3 P.M. After some weeks the patient submitted to a reversal of his daily life, and commenced to sup at 9 A.M.; he then went to bed, and stayed there till 9 P.M., when he got up and breakfasted. At 1 A.M. he dined. On the first day of change the filariæ were found as usual between 11 P.M. and 3 A.M., and were absent during the daytime. On the second day, blood drawn between 3 A.M. and 8.15 A.M. was free from organisms, but on this day filariæ were present at 1.30 P.M. and 2.10 P.M. From this time, filariæ were pretty constantly found between 5 A.M. and 7 P.M., times during which they had previously been absent, and the time of maximum frequency was changed to the early hours of the afternoon. They were never completely absent from the night blood. A complete reversal was not obtained during the time that the experiment lasted, some ten days, but the filariæ were found at practically any hour of the night or day during the period of reversal. During the last six days of the patient's stay in hospital no filariæ were found.

The patient left the hospital, promising to return at intervals, but failed to do this, and some months later it was ascertained that he had died in Reading Hospital a day or two after admission. No post-mortem was made, and nothing further was known of the patient.

The occurrence of filariæ in the blood as early as 3 P.M., while the patient was living his ordinary life, is unusual, and increases considerably the diurnal range usually described. Though a solitary observation, it is a perfectly reliable one. The rapidity with which a reversal in habit influenced the appearance of filariæ is also remarkable. The question naturally arises as to how far the cervical swellings were connected with the disease. They were situated the one at the junction of the thoracic duct with the left internal jugular, and the other at the junction of the smaller right lymphatic duct with the right vein.

Northwick-terrace, N.W.

MIDDLESEX HOSPITAL.—The Duke of Fife presided at a festival dinner in the Hôtel Métropole in aid of the funds of this hospital, and was supported by the Lord Mayor and the Sheriff of London. From the report, it seemed that there was a deficiency in the year's income of £8664. The Chairman, in proposing the toast of "The Middlesex Hospital," regretted that even the oldest and the best of those institutions stood in need of greater pecuniary aid. The contributions connected with the festival amounted to upwards of £2700. The health of the Chairman was drunk with much cordiality

ON THE DELIVERY OF THE LOOSE AFTER-COMING HEAD THROUGH THE HIGHLY CONTRACTED PELVIS OF A SCOLIO-RACHITIC DWARF.

BY HENRY BRIGGS, M.B., F.R.C.S. ENG.,
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IT is not often that we in Liverpool are called upon to undertake any serious obstetrical operations for the more extreme degrees of pelvic deformity. During the past four years ending December, 1889, out of a total of 10,372 deliveries in hospital, out-door and in-door, practice, craniotomy has been necessary only on three occasions, in each with uniform success to the mother. Of the three operations of craniotomy referred to, two were undertaken upon large head-first dead children after prolonged efforts had been unsuccessfully made by the forceps. Each occurred in the

FIG. 1.

practice of my colleagues, who reported minor degrees of pelvic contraction, and previous moderately easy forceps deliveries. The third case of craniotomy supplies the subject of this contribution. The comparative rarity in our midst of any considerable obstetrical mutilation of the infant is as consoling to us as it might be suggestive to the speculative statistician of the existence of any fortunate preventive influences, in our food supply or population, warding off grave rachitis. Osteo-malacia is rare with us. Aggravated instances of spinal deformity or other bony pelvic distortions are infrequent in our lying-in wards. So that, compared with their near neighbours in Manchester, the Liverpool women have proved themselves to have possessed a higher maternal standard. In Liverpool, one craniotomy in 3457·33 cases forms a striking contrast to one craniotomy in 700 cases, which Dr. Donald[1] pleaded was not a large proportion for the poor

[1] Obstetrical Society of London, 1889.

women of Manchester. Dr. John Phillips[2] estimated his hospital practice in London to have required craniotomy once in 275·4 cases, about one-third of the still greater proportionate need for the employment of the same operation in Germany. In Liverpool, therefore, under circumstances so generally favourable to the more normal processes of parturition, an obstetrician is all the more likely to be astonished at meeting with an instance of maternal deformity such as the one to which I now call attention.

C. M. D——, aged twenty-seven years, was born in Liverpool. She informed the nurse that her parents died whilst she was very young, and that she has a brother living who is a "much worse deformed specimen" than herself. Her total stature is 3ft. 10½in. The trunk is stunted in size and twisted in outline, the spine having aggravated scoliotic and lordotic curves. The ribs are correspondingly distorted, and were found almost to abut on the iliac crest on each side, an interval of only a finger's breadth on the left and two fingers breadth on the right existing. The pelvis will be described hereafter in connexion with the delivery of the fœtal head. The lower limbs are much bent. The engraving here produced illustrates an unusually extreme degree of rickety deformity. She married on Dec. 23rd, 1888, a healthy labourer. The last menstruation was noted on Jan. 18th, 1889. The poor woman, who resided in a suburb, had engaged a "handywoman," an unqualified midwife, to attend her, and after she had been in charge of this woman, and actually in labour, two whole nights and one day, Mr. F. J. Laimbeer of Stoneycroft was sent for.

Mr. F. J. Laimbeer has kindly reported his management of the difficulties. He found on his arrival the pelvis occupied by a lower limb. Mr. Laimbeer, sen., and Dr. J. McGeagh arrived to his assistance. The patient was placed under chloroform, and the efforts requisite to withdraw the infant's trunk are just as readily susceptible to accurate imagination as to the true descriptive faculty of any experienced obstetrician. It will be sufficient to say that the task was a prolonged and tedious one, in which slow and steady progress resulted until the shoulders were within reach; here the obstacles were perseveringly overcome, and then it was decided to complete an already partial decapitation. There was no skilled assistance at the onset; the practitioners in attendance had been called in too late to favourably entertain the idea of an abdominal operation in the interest of either the child or the mother. Decapitation is no new departure in obstetrics, and under the circumstances both expedient and justifiable. The woman was despatched to hospital, a distance of nearly three miles, and she arrived in perfect safety. I happened to be leaving the hospital, at the close of my visit, just at the time the cab drew up at the door on Sept. 26th, 1889. Dr. Armstrong and Dr. T. B. Grimsdale, two of my colleagues, promptly came to my assistance in response to the telephonic call. We all examined the poor woman. The pelvic measurements are shown in the accompanying woodcuts. The conjugate was

FIG. 2.

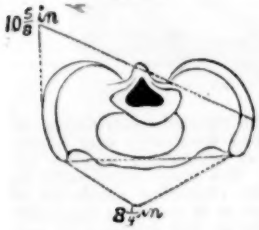
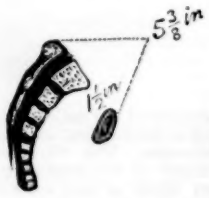


FIG. 3.



estimated at 1½ inches. There was slightly more room in the right than in the left lateral half of the pelvis. The tips of three fingers could not be placed in the pelvic antero-posterior diameter at the brim.

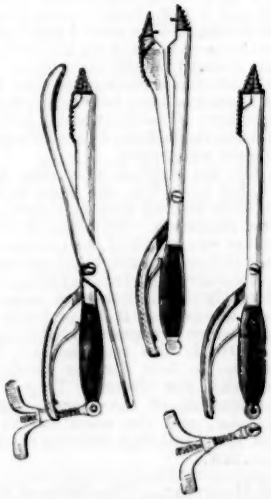
Subsequent confirmation of the fingers' measurement was obtained by the use of a lithotrite as an internal pelvimeter. The head lay at the brim, as exemplified in the woodcut, with its base downwards, whilst the face was directed to the right and slightly backwards. The head was, as usual, in the highly contracted pelvis, very inaccessible, the pendulous chin could be barely touched, and the base of the skull was not within the reach of the unaided finger. But when the head was subjected to external abdominal pressure from above, the base of the skull could be reached; otherwise the head lay very loose above the pelvic brim. There were conditions present which demanded a great deal, and fortunately our instrumental resources in the cephalotribe,

FIG. 4.

the cranioclast (with the perforator), and the basilyst-tractor are sufficient for what was wanted—namely, the delivery of a large loose head through a small pelvis.

I do not wish to raise the general question as to the choice of instrument. The selection of an instrument should be left to individual operators, but I trust I may be allowed to comment on the apparent advantages, and to note any appreciable disadvantage, of the basilyst-tractor as evident to

FIG. 5.



me during its employment in this solitary instance as a (1) perforator, (2) comminutor, and (3) extractor of the loose after-coming head. The basilyst-tractor was purchased for the Maternity Hospital, Liverpool, immediately after Prof. A. R. Simpson had published his introductory lecture.[3] It was then that I first became familiar with its history and impressed with its prospects. It struck me on

[2] Brit. Med. Jour., vol. i. 1889, pp. 1219, 1221.

[3] Ibid., Dec. 13th, 1884.

Sept. 26th, 1889, nearly five years afterwards, that I had an opportunity of testing its value in actual practice. I gladly acknowledge the apparent readiness with which the basilyst-tractor enabled me to cope for the most part with the awkward state of things. The basilyst is a powerful double-bladed instrument. A complete terminal screw is formed when the blades are closed. It was, I concluded after many trials, impossible for me to use the terminal screw as a perforator of the base of the skull in this case, because the head could only be imperfectly steadied by external manual pressure. Invariably any attempt to enter the screw into the base just pushed the head away.

I soon realised this, and substituted the Smellie's perforator with which to make the initial aperture near the basi-sphenoid. Granted then the apparent failure of the basilyst as a perforator of the loose after-coming head, which has been proved so difficult to steady, it was clear that if the basilyst were passed through the initial aperture now made, and the blades of the instrument forcibly separated, the base of the skull would be freely lacerated. It is true a large gap was made, and but little brain matter came out until after I had passed the external blade, the tractor, and commenced the traction. Traction through the narrow pelvis caused quite a sudden shower of brain matter, and the fœtal head in the grip of the basilyst-tractor quickly followed. The whole operation did not occupy more than twenty-five minutes, and fully half of this period was lost in the attempt to perforate.

The woodcut shows the basilyst within the skull and the tractor over the face with the thumb screw in the handle tightly "driven home." The lower maxilla was broken, and the upper maxillary, sphenoid, and palate bones partially crushed, lying between the blades. The grip was a firm and secure one; either this or the occipital grip is advised by Professor Simpson. No portion of bone in the fœtal head was uncovered to do damage to the maternal tissues. The tongue, the skin, and some of the deeper structures form the dependent tags represented in the woodcut. The base of the skull is recognisable as little more than a ring of bone. The basi-occipital, basi-sphenoid, and petrous-temporals are all separated on opposite sides of the gap. The perforation had been made somewhere near the basi-sphenoid, and the powerful lacerating force of the basilyst had driven the basal bones widely apart. The vertex was not perforated. Whenever the compressing force was withdrawn the head at once assumed a more rounded contour, like the normal head.

FIG. 6.

Lateral compression flattens the head similarly to the flattening of an empty indiarubber ball syringe; but, unlike the latter, the sutures and bones of the head produce a more irregular surface. The collapsed head in its bi-parietal and bi-mastoid diameters easily glides between the points of a pair of callipers an inch and a half apart, and increased pressure effects a further reduction until the callipers need have their points little more than one inch apart. The collapsed head in its occipito-frontal diameter was not quite so reduced; with moderate pressure it would just pass between the points of the callipers, an inch and a half apart; any further reduction of this diameter, I believe, is practically impossible on account of the shape and relations of the occipital, frontal, and upper maxillary bones. The labour after the delivery of the head was terminated by the natural expulsion of the placenta. The uterine douche of 1 in 4000 sublimate solution was used immediately. With the exception of slight febrile disturbance in the first week, the temperature twice at night reaching 101·4°, the patient made a good recovery.

Liverpool.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum propriias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Prœmium.

ST. THOMAS'S HOSPITAL.

SURGICAL CASES OF INTEREST.

(Under the care of Mr. CROFT.)

FRACTURE of the anatomical neck of the humerus, with displacement of the head of the bone downwards or downwards and forwards into the axilla outside the capsule, is an accident of considerable rarity. It is somewhat surprising that there is no instance on record in which this separated head has acted as a sequestrum and required removal as such, for when unattached to any part of the torn capsule it is quite isolated from blood-supply. A case is described as having been under the care of Poland[1] at Guy's Hospital, thought to have been a dislocation of the humerus into the axilla; but under chloroform a fracture through the anatomical neck was detected, and the displacement of the bone could not be reduced. Although two inches shortening resulted, the patient regained considerable use in the limb. Fraser[2] replaced the dislocated head in a boy aged fifteen years, and obtained a good result. Morton,[3] who had to treat a fracture in this situation with displacement of the head, was one of the first to carry out excision of the separated fragment; he obtained a satisfactory result. At a meeting of the Society of German Surgeons[4] in 1888 Helferich narrated the history of a case in which he had cut down upon the separated epiphysis of a humerus, reduced the displacement, and secured the head of the bone by means of a steel pin, which was kept in position for a fortnight. The result was satisfactory. At the same meeting Bruns reported two cases and Woelfler one, of separation of the epiphysis or fracture, with dislocation of the head, successfully treated by excision of the upper fragment. In this patient there was considerable shock, and this, as well as the severity of the local injury, testified to the amount of violence to which he had been subjected. In addition to the fracture and displacement, there was very severe contusion and stretching of the nerves, and extravasation of blood in the axilla, and it was a long time before the man regained power to any extent in the arm; even now there is some weakness remaining. For the account of these cases we are indebted to Mr. Turney, late house surgeon.

CASE 1. *Dislocation and fracture of the head of the humerus.*—T. G——, aged thirty-three, was admitted on Nov. 8th, 1889, having fallen through an open trap-door for a distance of about eighteen feet. He was taken to a medical man, who diagnosed dislocation of the right shoulder, and, failing to reduce it, sent him to the hospital. On examination, the shoulder was obviously flattened, the head of the humerus was absent from the glenoid cavity, and the upper end of the bone was carried upwards, forwards, and inwards. Measurement from the top of the shoulder to the external condyle showed one inch shortening. A hard semi-globular mass was felt lying free in the axilla, and this was supposed to be the detached head of the humerus. There was extensive ecchymosis over the outer part of the great pectoral, which later on extended over that side of the chest. The patient was shortly afterwards anæsthetised, and an ineffectual attempt was made to get the free head back into the glenoid cavity. On Nov. 11th Mr. Croft performed the following operation. An incision was made along the anterior fold of the axilla, and, dissecting down through tissues infiltrated with blood, he found the head of the bone lying loose just below the glenoid cavity. The nerve cords and axillary vessels were roughly separated from the other tissues. The upper end of the

[1] Guy's Hospital Reports, Third Series, vol. i.
[2] American Journal of the Medical Sciences, 1869.
[3] International Encyclopædia of Surgery, vol. iv., p. 120.
[4] Sajous, Annual of the Medical Sciences, vol. iii., G. 3.

shaft was examined and the jagged end trimmed with bone forceps. The fracture ran almost exactly through the anatomical neck, the broken surface being very irregular. The cavity was syringed out with a solution of perchloride of mercury (1 in 1500), the wound stitched up with a small drainage-tube, and antiseptic dressings applied. The night of the operation the temperature reached 100·6°, but after that never exceeded 100°. There was very free sero-sanguineous discharge during the first twenty-four hours. The last stitches were taken out on Nov. 18th, and the wound was healed absolutely without suppuration on the 21st. The ecchymosis during the first few days extended all over the right side, the shoulder, and down the arm to the elbow. On Nov. 26th the patient had hardly any power in the forearm or the fingers, all the movements being affected; there was considerable mobility at the shoulder, but no power of voluntary movement. From this time till the man's discharge on Feb. 4th, 1890, he was treated by one hour's massage a day and the interrupted current twice a week. He steadily but slowly improved, and when he left the hospital could close his fingers with some degree of force and could with difficulty get the hand to his mouth by movement at the elbow. He had some mobility at the shoulder-joint, but very slight voluntary power. There was still much induration of the tissues about the upper arm. The patient continues to improve.

In the hospital practice of this country bullet wounds are of comparative infrequency, and the account of this case will be read with interest. In the more favourable surroundings of civil life these injuries, though always grave, are much less fatal than during warfare; the missiles are usually smaller, the patient is seen at an earlier date, and it is easier to secure rest and carry out a definite plan of antiseptic treatment. During the American War the mortality from supposed penetrating wounds of the chest was 65·19 per cent., showing an improvement on the English returns for the Crimean campaign, which were 79·26 per cent. An important event in this case was the onset of symptoms, vomiting of blood, &c., which might have been due to wound of the stomach, and on account of which exploratory operation was undertaken. The operation itself, which was carried out with full precautions, proved quite harmless, and there is no doubt that operative measures for wounds of the hollow viscera are most successful when performed early before the onset of peritonitis. We published in 1887[5] the account of a case somewhat similar to this which had been under the treatment of Mr. Croft. The patient, aged thirty-three, had shot himself with a revolver in the second intercostal space on the left side, just internal to the nipple line. The bullet, which was found on the vertebral border of the scapula, about an inch and a half from the spine, was extracted some nineteen days later. The symptoms presented by the man were those of severe shock, emphysema of the chest wall extending to the neck, hæmoptysis, hæmopneumothorax, and localised pneumonia. Recovery was complete, and the diagnosis further confirmed by the coughing up of a portion of the bullet a month after he left the hospital.

CASE 2. *Pistol shot wound of the chest and lung; recovery.*—O. H——, aged twenty-three, was admitted to the Edward ward of the hospital at 1.30 P.M. on Nov. 11th, 1889, having attempted suicide with a revolver two hours previously. When first seen he presented the symptoms of collapse with a feeble pulse and cold perspiring skin. He was, however, quite conscious, and complained of thirst. No blood had been coughed or spat up before admission. Respiration 36. On examination a large round hole was found burnt through his shirt and vest over the præcordial region or slightly below. Corresponding to this in position was a small round wound three-quarters of an inch in diameter in the thoracic wall; its exact position was three inches below the left nipple and two inches internal to it, two inches and three-quarters from the middle line at the level of the tip of the ensiform cartilage, and three inches vertically above the thoracic margin. There was slight bruising of the margin of the wound, but no blood. The surface was cleansed and an antiseptic dressing at once applied. On examining the back a small, hard, round substance was felt a little to the left of the mid-line at about the level of the nipple, and therefore higher than the aperture of entry. It was tender on pressure, and there was no crepitus about it. A small quantity of bright blood was coughed up soon after admission. During the first six hours after admission, the patient gradually developed the signs of pneumo-thorax on the left side; that half of the chest in its upper portion was hyper-resonant, and the bruit d'airain was elicited. There was dulness at the left base, with other signs of fluid, probably blood. At 4 P.M. the temperature was 96·4°, pulse 80, and respiration 36. At 12 P.M. the temperature was 99·2°, pulse 104, respiration 40. At 12 P.M. the patient vomited a large quantity of blood of a dark colour. He was much troubled with cough and dyspnœa.

Nov. 12.—1.30 A.M.: Patient still vomiting blood in small quantities. Mr. Croft decided to explore the abdomen. At the time of operation the epigastric region was fully resonant, and there was no dulness in the flanks. A median incision was made four inches in length and terminating below at the umbilicus. On the peritoneum being divided the distended colon presented; the finger was then inserted, and the stomach found to be apparently uninjured; in fact, the inner surface of the abdominal wall corresponding to the wound was found to be intact. There was no blood in the abdominal cavity. The wound was closed and dressed antiseptically.

13th.—Till 2 P.M. to-day the patient was fed by the rectum, and only given ice to suck. He is now given milk and arrowroot in small quantities and frequently. More blood was vomited for some hours after the operation. The patient still coughs up small quantities. Temperature normal; pulse 72.

16th.—Patient still on fluid diet. Has no pain. On the left side of the chest there is still dulness as far forwards as the post-axillary line, and up to the angle of the scapula, with signs of fluid. Slight cough; sputa blood-stained.

28th.—The abdominal wound is now healed. The dull area of the chest is somewhat less.

Dec. 9th.—Mr. Croft made an incision over the substance which was mentioned as having been felt near the spine at the level of the tenth left rib, and removed it. As expected, it proved to be the bullet. It was of a conical shape, and deeply grooved down one side. It weighed forty-three grains, as against forty-two, its original weight.

12th.—The patient was provided with an abdominal belt, and discharged well. There is still dulness at the left base, but no other sign of disease.

[5] THE LANCET, vol. i. p. 266.

DUNDEE ROYAL INFIRMARY.

A CASE OF SPINAL MYELITIS; DEATH; REMARKS.

(Under the care of Mr. A. M. STALKER.)

SINCE the paper which was read by Dr. Charlton Bastian at the meeting of the Medical and Chirurgical Society in February,[1] on the Symptomatology of Total Transverse Lesions of the Spinal Cord, a modification of the current views as to the symptoms of complete transverse lesions of the cord will be necessary,[2] and we look forward to reports of cases bearing further evidence as to the truth of Dr. Bastian's contention. Mr. Stalker's case is to some extent a contribution to the subject, but much of its value is lost from want of the evidence as to the exact lesion on which the symptoms depended, and which could only be supplied by a post-mortem examination. For the following report we are indebted to Messrs. W. Douglas Erskine and J. A. Campbell Kynoch.

A. R——, aged thirty-four, was admitted on March 27th, 1889. She complained of weakness with some pain in the left shoulder, and had had these complaints for nearly a year. On admission she was ill-nourished and anæmic, walking slowly but steadily, with but a moderate appetite, constipated bowels, a quick pulse (120), and no disease of the thorax or abdomen. Temperature was 99°, and for some weeks after mostly normal. She said that she menstruated regularly up to the time of entrance into the hospital. The pain about the shoulder she said kept her from sleeping. There was nothing wrong with the urine. Various remedies, constitutional and local, were tried on the supposition that the case might be rheumatic, but none of them had the smallest permanent effect. She lost sleep at night with the pain, which, from being confined to the left shoulder, spread to the other, and after a few days more to the front of the upper part of the chest.

[1] THE LANCET, vol. i. 1890, p. 406. [2] Ibid., p. 557.

On April 27th she was noticed to hold her head stiffly and rather thrown back, and to complain of pain if it was passively moved. There was distinct tenderness over the second and third dorsal spines. A blister there did no good. On May 11th, for the first time, she had retention of urine. This persisted, giving place after a time to simple incontinence. When the lower extremities were examined on the 13th the knee-jerk was found well marked on the right side and exaggerated on the left, with very distinct ankle clonus on the left side. The plantar reflexes were not exaggerated. There were no skin reflexes on the trunk. The bowels were very constipated. On the 15th she complained of a constant sensation of cold in the legs, though the surface temperature was actually unaltered. Ankle clonus well marked in both legs. Plantar reflex most marked on the left side. The neck was still held very stiffly. She experienced pain over the spine of the right scapula, but felt no tenderness over the spinal column. She walked now with great difficulty. On the 18th she complained very much of want of sleep, owing to the discomfort of constantly lying on her back. (Narcotics had all along very little effect in relieving her sleeplessness.) Her appetite began to fail her steadily. The power in the legs did not permit of standing now, and even when lying in bed she was able to move the feet but very slightly and the knee-joint only when the toes were slightly pinched. She was unable to raise herself up in bed, and when raised supported herself by grasping the bedclothes in front. Sensation was fairly perfect all over except in the lower extremities, where she complained of a pricking sensation. Ankle clonus was quite absent on the left side, and present for one or two jerks only in the right. Knee jerk about normal. Muscles noted as wasted over the calf and softened in the thigh, about in the same condition as they were on admission in the trunk, and wasted in the upper extremities. On the 22nd emaciation seemed, while marked in both upper and lower, to be making most progress in the upper extremities. Sensation abolished in the lower extremities and over the trunk below the level of the fifth dorsal spine. No reflexes either in the trunk or lower extremities. On the 23rd a bedsore made its appearance over the sacrum. On the 24th each heel was covered with a large blister. She complained of pain down both arms. On June 3rd the lower extremities were noted as quite flaccid. On the 6th she still complained of pain in the arms. She died on June 12th from septic absorption from bedsores and bladder. A necropsy was refused.

Remarks by Mr. STALKER.—The absence of a post-mortem examination leaves this case very incomplete. I should not indeed desire to place it on record at all had it not been that Dr. Bastian's paper on the symptomatology of total transverse lesions renders possible a very different interpretation of the symptoms from that which could be given on accepted theories. The case was one of spinal myelitis in the upper dorsal division of the cord preceded by symptoms of meningeal irritation about the lower cervical vertebræ, probably from caries. From the inception of the symptoms indicating that the cord itself was affected three distinct stages can be traced. First, a period marked by retention of urine, gradual increase of the deep reflexes, and rapid loss of motor power in the legs. This lasted about six days. Second, a period also of about six days, during which the deep reflexes rapidly disappeared, the paralysis of motion in the affected area became complete, and sensation affected up to perfect anæsthesia. Third, the last three weeks of her life in which bedsores and cystitis played their usual part. To explain these three stages, unless Dr. Bastian's point of view is assumed, it is necessary to suppose that the myelitis was descending, beginning in the dorsal cord and passing down into the lumbar enlargement. Accepting Dr. Bastian's interpretation, we only require for the production of the whole train of symptoms a myelitis gradually involving every element in the cord at the original level, until the lesion becomes, in the full sense of the term, total transverse. The latter way of looking at it is tempting and is supported by various considerations, chief among them being that the preservation or increase of the reflexes is best observed in precisely that class of cases of myelitis which so frequently surprises the medical attendant by partial recovery—I mean the cases of compression from spinal caries. The state of the nutrition in the lower extremities in the above and similar cases raises Dr. Bastian's theory in another form. In the report of his paper and of the discussion which followed it nothing is said of the intimate association between the state of the nutrition and the state of the reflexes. In compression from caries we know that nutrition is frequently very well preserved; so also in lateral sclerosis. Up to the present this has been explained by assuming that the integrity of the reflex arcs guarantees the preservation of the deep reflexes and of the nutrition of the skin and muscles, and the evidence is very strong that these two things are closely associated. The new reading of the effects of total transverse lesions will no doubt take account of this association. But the modifications in the pathology of spinal diseases which Dr. Bastian's theory would entail are endless.

Medical Societies.

ROYAL MEDICAL & CHIRURGICAL SOCIETY.

History of Uric Acid in the Urine.

AN ordinary meeting of this Society was held on March 25th, the President, Mr. Timothy Holmes, in the chair.

Sir WILLIAM ROBERTS read a paper on the History of Uric Acid in the Urine, with reference to the formation of uric acid concretions and deposits. He said that the presence of uric acid in human urine was somewhat of an anomaly. As a vehicle for the elimination of nitrogen it was not needed. Its place was taken by urea, which, by its easy solubility, was better adapted to the mammalian plan of a liquid urine. The conjecture was hazarded that uric acid should perhaps be regarded as a vestigial remnant—as a memory of some far distant link in the chain of mammalian descent. But, although physiologically insignificant, uric acid was pathologically the most prominent component of the urine. This was due to its clumsy behaviour in liquid media and its tendency to form concretions. He first alluded to the spontaneous precipitation of uric acid in normal urine. All acid urines tended inevitably to deposit their uric acid sooner or later. The time of onset of precipitation varied from a few hours to five or six days, or even longer. The inference was drawn that pathological gravel was due to an exaggeration of conditions which existed in a less pronounced degree in health. To get at an explanation of this spontaneous precipitation it was necessary to examine the states of combination of uric acid in urine. The author next dealt with the composition and reactions of the amorphous urate deposit and of its natural and artificial counterparts. He said that uric acid ($H_2\bar{U}$) was a bibasic acid, and formed two regular orders of salts—namely, neutral urates ($M_2\bar{U}$) and acid urates or biurates ($MH\bar{U}$). But in addition to these it formed a series of hyperacid combinations, first discovered by Bence Jones, and termed by him "quadrurates" ($MH\bar{U},H_2\bar{U}$). The neutral urates were never found in the animal body, and were only known as laboratory products. The biurates were only encountered pathologically as gouty concretions. The quadrurates, on the other hand, were specially the physiological salts of uric acid. They constituted the exclusive combination in which uric acid existed in solution in normal urine, and they became visible sometimes as the amorphous urate sediment. The urinary excretion of birds and serpents was composed exclusively of quadrurates. The quadrurates could, moreover, be formed artificially under conditions which prevailed in the animal body. The special and characteristic reaction of the quadrurates was that they were immediately decomposed by water into free uric acid and biurates. A chemical explanation of the spontaneous precipitation of uric acid in urine was then given. He proved that uric acid existed in normal urine exclusively as quadrurate. It existed in acid urine in the presence of water and of superphosphates. These conditions necessarily involved the ultimate liberation and precipitation of uric acid. The first step was the breaking up of the quadrurate by the water of the urine into free uric acid and biurate according to the following equation:—

$$(MH\bar{U},H_2\bar{U}) + Aq. = (H_2\bar{U}) + (MH\bar{U}).$$

Quadrurate. Free uric acid. Biurate.

This explained the liberation of half the uric acid. But the biurate thus formed was forthwith changed in the presence of superphosphates into quadrurate. Thus:—

$$2(MH\bar{U}) + (MH_2PO_4) = (MH\bar{U},H_2\bar{U}) + (M_2HPO_4).$$

Biurate. Superphosphate. Quadrurate. Dimettalic phosphate.

By these alternating reactions all the uric acid was at

length set free. The ingredients in the urine which inhibited or retarded the precipitation of uric acid in the normal state were referred to. Seeing that uric acid existed in acid urine (that is, for some sixteen hours out of the twenty-four) amid conditions which, if they stood alone and uncontrolled, would lead to its immediate precipitation, and yet that in the normal course no such early precipitation occurred, it was obvious that the urine must contain certain ingredients which inhibited or greatly retarded the water of it from breaking up the quadrurates. These inhibitory ingredients consisted chiefly at least of (1) the salines, (2) the pigments of the urine. He summarised the history of uric acid within the urinary channels in the normal state and in the subjects of gravel, and finally alluded to the factors which determined the occurrence of uric-acid concretions and deposits. The general results of this part of the inquiry were summed up in the following propositions. The conditions of the urine which tended to accelerate the precipitation of uric acid were (1) high acidity, (2) poverty in salines, (3) low pigmentation, (4) high percentage of uric acid. The converse conditions tended to retard precipitation. On the interaction of these factors the occurrence or non-occurrence of uric-acid gravel appeared to depend, and probably the most important of these factors was the grade of acidity.

Dr. GEORGE HARLEY said he had always been taught to look upon uric acid in urine as a normal physiological product, and he asked what evidence there was of its being a vestigial remnant or memory of some far distant link in the chain of mammalian descent. Every change in the tissues was accompanied by waste, and left, so to speak, its ashes behind, and he had hitherto regarded uric acid as part of these ashes. All animals did not excrete the same acid in the urine; in the herbivora, for instance, it was in the form of hippuric acid, which was more soluble than uric acid. He did not wish to deny that urea was a soluble product that might render useless, at any rate in the human organism, any excretion of uric acid. The arguments against uric acid being a vestigial remnant he held to be these: all animals excreted it in the urine, some in a solid form—such as bears, serpents, and insects. At the first glance one was apt to think that the excretion was due to the diet, but the human infant and the calf during the first fourteen days of their existence were fed on milk of very similar composition, but during that time the infant excreted a larger amount of hippuric acid than uric acid, while the calf during the same time excreted no hippuric acid at all. Hot weather, exercise, and nitrogenous diet increased the amount of uric acid excreted, but with respect to the latter there was this curious contradiction, that the serpent, which was wholly carnivorous, passed about the same proportion of uric acid as the graminivorous fowl and strict vegetarian insects like the bee and butterfly. These facts showed that the question was not altogether one of diet. There was a popular idea that sugar increased the amount of uric acid excreted, but recent experiments showed that this was a fallacy. He felt sure that in wine it was the acid and alcohol, and not the sugar, which brought about the increase of uric acid.

Sir ALFRED GARROD said he fully concurred in all that the author had advanced; he himself attached great importance to the influence of the salines and pigment in impeding the precipitation of uric acid. He had never believed that the ingestion of sugar increased the output of uric acid, nor did he believe that sugar had any effect on gout, rheumatism, or the allied disorders. As to uric acid being a vestigial remnant, he said it was found in the urine of nearly all animals, even in the horse it was found when the urine was clear. Some amount of nitrogenous food was necessary for the production of uric acid; but some animals would under any circumstances pass much more than others. It was not the absolute quantity of uric acid excreted that was of importance, but the possibility of its being thrown down. The paper was most valuable as calling attention to the circumstances which accelerated or retarded the precipitation of the acid.

Dr. JAMES JOHNSTON felt sure that animal food had no effect on the production of uric acid. He referred to the fact that, whereas in Northern China calculus was very rare, in the southern provinces it was quite common. The people were very temperate and lived chiefly on rice, with occasionally a little pork. The natives thought that the soil and water had something to do with it, but analysis did not bear this out. The heat of the climate produced free action of the skin with resulting concentration of the urine, but foreigners living in Southern China, though decidedly free livers, enjoyed a remarkable immunity from calculus. He thought uric-acid calculus was explained by some conditions in connexion with health at present not determined.

Mr. REGINALD HARRISON questioned the previous speaker as to the consumption of salt in the calculous districts, as Indian surgeons attached a good deal of importance to the absence of salt from the diet as predisposing to the formation of uric-acid calculi.

Dr. JOHNSTON replied that there was a marked deficiency in the amount of salt in the food in Southern China.

Sir WILLIAM ROBERTS, in reply, said that although he did not mean that his idea of uric acid being a vestigial remnant should be taken quite seriously, yet he thought there was a kind of analogy between it and such vestiges as the vermiform appendix. Like the latter, though of no use physiologically, it was often potent for evil. A good deal of difference of opinion had existed with reference to the effect of food upon the formation of uric acid, but it did not seem that diet had much to do with it. For treatment but little could therefore be done in the way of diet; but in the children of the poor the want of salt in the food increased the tendency to the precipitation of uric acid, and rice was peculiarly poor in salines. The inhibitory influence of the pigments was seen in wasting diseases, where the high-coloured urine contained no gravel, though it was rich in uric acid. The relation of the quadrurates to normal urine was curious; distilled water caused immediate deposition of uric acid, whereas the addition of normal urine to a specimen had no effect.

MEDICAL SOCIETY OF LONDON.

Subacute Indurative Pneumonia.—Dupuytren's Contraction of Fingers.

AN ordinary meeting of this Society was held on March 24th, the President, Mr. J. Knowsley Thornton, in the chair.

Dr. PERCY KIDD read a paper on Subacute Indurative Pneumonia. The object of the paper was to consider the group of cases in which fibrous changes in the lung were the direct sequel of a more or less acute pneumonia. Two illustrative cases were described in which this sequence of events was beyond doubt. The onset of the disease was well defined and acute, but the constitutional disturbance was less severe and later in its developments than in the classical form of pneumonia. Pyrexia was moderate in degree and of irregular type. The sputum was not rusty or characteristic of pneumonia; in one case it became putrid towards the close. In each instance a fatal termination was reached within four months from the commencement of the illness. In one case death was due to cardiac failure; in the other it depended on septic broncho-pneumonia and nephritis. Post-mortem examination disclosed a lobar consolidation in each instance, with cavities of varying size and character, and an absence of any tubercular lesion. Microscopically the induration was found to be due to organisation of a fibrinous intra-alveolar exudation in the first case; in the second the connective tissue growth was interstitial. The conclusion was drawn that these cases represented a special variety of pneumonia distinct from the classical sthenic type, and it was suggested that this form of disease, to which attention had lately been directed by Heitler and others, was best described as "indurative pneumonia."—Mr. THORNTON asked what was the reason for the puncture of the chest in the second case.—Dr. THEODORE WILLIAMS thought these cases of indurative pneumonia were allied to the interstitial variety. In each of the cases related there had been pleurisy, and the fibrous tissue might have been derived from pleural ingrowth. However, cavity formation, which had occurred in the cases related, was not found in interstitial pneumonia. Cases of acute sthenic pneumonia usually cleared up entirely, and where dulness persisted it was generally due to pleural thickening.—Dr. COUPLAND referred to a case he had published in the Pathological Society's Transactions which agreed with the "grey or slaty induration" described by Addison, who deserved credit for differentiating it from tubercular disease. Cases of acute pneumonia going on to induration were extremely rare. He could recall few cases of cronpous pneumonia which had left the hospital with the physical signs unresolved, but where this occurred he looked upon it as pleural thickening. Cases such as those related formed a

separate class, which did not run the ordinary course of croupous pneumonia, and there was a great tendency to necrosis and cavity formation. In many that had been recorded there were degenerative lesions in other organs; granular kidney and a history of alcohol were not uncommon.—Sir HUGH BEEVOR asked if it were not difficult to recognise these cases at a late period. He thought they might lead to contraction of the lung, with pleural thickening.—Mr. H. H. TAYLOR said the needle was used in the second case for diagnostic reasons, the signs of fluid being equivocal. Needle puncture, as a rule, was quite harmless, but in one case of bronchiectasis with fetid sputum the pleura became infected as the needle was withdrawn.—Dr. KIDD, in reply, said he was pointing to a group of cases which began subacutely and ran on to a fatal termination or recovery with a damaged lung. The theory of a pleurogenic cirrhosis had been vastly overdone; it was no doubt very rare. He had never seen a case of acute croupous pneumonia go on to induration, though he believed it might happen. In these cases the upper lobe was more affected than the lower. In cases with a marked onset there had not been much chronic disease of other organs or history of alcoholism. After the lapse of a few months it was hard to differentiate these cases, the lung being reduced to a series of cavities surrounded by fibrous tissue.

Mr. ADAMS read a paper on Further Observations on the Treatment of Dupuytren's Finger Contraction. He gave a general *résumé* of the work done by other observers, and contributions to our knowledge of the pathology, clinical history, and treatment of Dupuytren's finger contraction during the last ten years. Since the publication of his treatise on this subject in 1879 two distinguished American surgeons, Dr. W. W. Keen of Philadelphia and Dr. Robert Abbe of New York, had contributed important papers. Dr. Abbe had published two papers in support of his views that Dupuytren's finger contraction was of a neurotic origin, and many remarkable cases of neurotic symptoms associated with it were related. Dr. Keen did not admit the neurotic origin, but observed that Dr. Abbe's theory of a nervous origin seemed to him only probable in so far as gout and rheumatism were possibly nervous in their remoter origin. Mr. Adams had not met with any cases associated with the neurotic symptoms described by Dr. Abbe, and still believed in the gouty thickening of the palmar fascia. Dr. Keen had contributed a valuable statistical table of 253 cases collected from various sources, including seventy cases recorded by Mr. Noble Smith in 1885. As to treatment, Mr. Adams still adhered to the subcutaneous operation, which he had practised for many years—viz., the subcutaneous division of all the contracted bands of fascia that could be detected by as many punctures as might be necessary—followed by immediate extension, or extension as rapidly as it could be carried out, without causing pain. Notwithstanding the success which had followed this operation in the hands of all surgeons who had paid sufficient attention to all the necessary details, some English and American surgeons had been inclined to return to the old method of open wound, with antiseptic dressing. Mr. Macready[1] had recently ably compared the relative merits of the subcutaneous and the open-wound operation. The open-wound operation was totally inapplicable to the cases of phalangeal contraction, and when this operation was performed, if relapse should occur from cicatricial contraction, the case became hopeless. In one case of this kind Mr. Macready was obliged to amputate the little finger. The subcutaneous operation could be repeated with as much success as the first operation. In the after-treatment, Mr. Adams still used the steel instrument fitted to the dorsal aspect of the hand, with prolongations along the contracted finger, or fingers, having joints corresponding to the phalangeal articulations, movable by rack-and-pinion joints, in all cases of phalangeal contraction. In cases of simple palmar contraction this might be dispensed with, and a padded metal splint, capable of being bent to any curve and altered from day to day, might be applied. Mechanical extension should be maintained for three weeks, night and day, allowing only a little passive movement, and then gradually discontinued during the day, but maintained at night for several months by a simple form of retentive splint. — Mr. N. SMITH was at first inclined to think from the cases he had seen that gout and rheumatism were not such frequent causes of this affection, but a more extended experience had caused him to come round to Mr. Adams's view. He was also prepared to agree with the author that multiple subcutaneous incisions were advantageous. The cutaneous indurations disappeared rapidly after the treatment by incision.—Mr. LOCKWOOD said that the question of the causation of Dupuytren's finger contraction rested chiefly on clinical evidence, but he had made a necropsy on a case in which there was general gouty disease of the joints, and in which the fascial contractions were found to be encrusted with urate of soda. He believed in the good results to be obtained by the subcutaneous method of operating.—Mr. ADAMS, in reply, said that he had had no opportunity of dissecting these cases; his experience was entirely clinical.

[1] Brit. Med. Jour., Feb. 22nd, 1890.

MIDLAND MEDICAL SOCIETY.

WEDNESDAY, MARCH 12TH.

MR. LAWSON TAIT, F.R.C.S., PRESIDENT, IN THE CHAIR.

Carotid Aneurysm.—Mr. JORDAN LLOYD showed a woman, aged forty-nine, in whom he had tied the left common carotid artery at the root of the neck, below the level of the omo-hyoid muscle, twenty-five days before. The aneurysm was of nine months' duration, and had doubled in size during the last five or six weeks. It was as large as an adult fist, and extended from the parotid region to below the level of the cricoid cartilage. There were ptosis of the left eyelid with contracted pupil, dysphagia and neuralgic pains over the shoulder and clavicle, with all the classical symptoms of aneurysm. The vessel was exposed through a straight incision below the level of the cricoid, no muscles were divided, the artery was easily found and tied with ordinary medium-sized catgut ligature. Dry boracic dressings were employed, and the wound healed entirely in three or four days.

Tubercular Testes.—Mr. JORDAN LLOYD also showed both testes removed from a child five years of age for chronic tubercular disease. The malady had existed for eighteen months, had proved intractable to milder treatments, and had hopelessly destroyed both organs.

Mr. HASLAM showed a girl aged seven who had a congenital dislocation of the left hip.

Recurrent Palpitation.—Dr. T. STACEY WILSON showed a patient who exhibited in a fairly well-marked manner the condition aptly termed by Dr. Bristowe "recurrent palpitation." The patient had, during the last eighteen months, had three attacks of palpitation, each lasting several weeks, in which the cardiac pulsations were seldom below 150 and sometimes exceeded 200, but which were unaccompanied by dyspnœa except early in the morning. There have never been any signs of organic cardiac disease except a certain amount of dilatation accompanied by slight anasarca and some cyanosis. He has been completely relieved by digitalis in both his previous attacks.

Chronic Phthisis with Unusual Dislocation of the Heart.—Dr. FOXWELL exhibited a man aged twenty-one having the usual evidences of advanced fibroid phthisis of the left lung, the amount of disease at the base being extreme. The absolute cardiac dulness towards the right did not reach the left edge of the sternum by an inch. The apex beat was observable in the fifth space and an inch to the left of the left nipple line. There was thus not merely a displacement of the heart by the tilting of the apex upwards and outwards, but a dislocation of the heart *en masse* for more than an inch towards the left side. These signs were not due to the overlapping of a dilated heart by a hypertrophied right lung, but seemed to be caused by the pleural and peripleural thickening which had occurred during the course of the fibroid phthisis. A similar result had taken place in the case of a girl, whom he showed to the Society a month ago, with a spine rigid from inflammatory thickenings which had arisen in the course of an empyema of several years' duration.

Hysterical Laryngismus.—Dr. SUCKLING showed a girl aged eleven who a few days previously had been seized with peculiar convulsive attacks. In the attacks the eyes were turned upwards, and the respiration became stridulous. The attack ended with sobbing. Dr. Suckling found that an attack could be brought on by sternly ordering the girl to go off into an attack, and that an attack could be cut short by a similar method. The girl was anæmic, and had been overworked at school. The girl's mother stated that any emotional disturbance at once caused an attack. There was no loss of consciousness.

Notices of Books.

Lehrbuch der Allgemeinen und Speciellen Pathologischen Anatomie. Von Dr. ERNST ZIEGLER. Sechste Auflage. Erster Band: Allgemeine Pathologische Anatomie und Pathogenesis. Jena: Gustav Fischer. 1889 — Professor Ziegler's text-book is so familiar and so highly appreciated that it hardly needs any further commendation to bring it to the notice of the pathological student; and yet the appearance of a sixth edition, which has been most thoroughly revised and improved by the addition of many more illustrations, executed in the delicate style with which readers of the work are familiar, deserves some notice. For although only two years have elapsed since the publication of the fifth edition, Professor Ziegler has not been contented to allow his work to pass out of the press again without further careful editing. The progress of pathological science even in so short a space of time calls for continued watchfulness on the part of authors of text-books on the subject, lest they should fall out of date. It may suffice here to notice the chief additions that the author has seen fit to make. He has amplified the chapter on Necrosis by some passages upon somatic death. In speaking of Mucous Degeneration, we find reference to myxœdema; and in the section on Hypertrophy there are introduced engravings of elephantiasis, acromegaly, and leontiasis. More information is supplied upon the nuclear changes which play probably the chief *rôle* in cell life, normal and morbid. The subject of Inflammation has been revised and rearranged, and the sections devoted to Bacteriology have been recast and rewritten, elimination as well as addition being freely practised. In that way a more concise view is gained without prejudice to the comprehensiveness of the subject. There are new paragraphs upon the Attenuation of Virus and upon Immunity from Infection. Some micro-organisms have received further exposition—e. g., the diplococcus pneumoniæ, about which so much has been learnt within recent years, and the bacillus of tetanus discovered by Nicolaier, and those of diphtheria and typhoid fever. The chapter on Malformations has been rendered more complete, and is profusely illustrated. Prof. Ziegler has also merited the thanks of his readers by a simplification in the arrangement of the bibliographical references at the close of each section, which will greatly facilitate the work of those who desire to pursue any special branch of the literature of this vast subject. To be sure, the volume is increased by about seventy pages and some forty new figures, but, after all, this is a minor consideration. There is no work which can be more safely recommended to the German-reading student than this.

The Treatment of Internal Derangements of the Knee-joint by Operation. By HERBERT W. ALLINGHAM, F.R.C.S., Surgeon to the Great Northern Central Hospital, Surgeon to the Surgical Aid Society, &c. London: J. & A. Churchill. 1889.—The title of this work exactly describes its scope and purport. During the last few years several surgeons, discontented with the routine treatment of internal derangements of the knee-joint, have freely explored the joint with a view of rectifying as far as possible the lesions found there. Mr. Herbert Allingham has taken an active share in this surgical advance, and he has now collected his own cases and those of other surgeons in which this active operative treatment has been carried out. The record of cases is prefaced by a statement of the anatomical and pathological data on which the treatment is based. The excision or suturing of detached and misplaced semilunar cartilages has been attended with a great measure of success, and promises to become a recognised procedure. Mr. Allingham strongly advocates a vertical incision as opposed to a transverse one, and the reasons he urges in its favour are certainly weighty. The great improvement in our means of dealing with wounds enables surgeons to undertake with safety operations that would have been quite unjustifiable twenty years ago; and it is only in accord with all precedent that large joints should share in the recent extension of the area of operative surgery. The work of Lister, Annandale, Robson, H. Allingham, and others in this direction ought to attract the attention of surgeons, and the appearance of this *brochure* is very timely.

The Uses of Electrolysis in Surgery. By W. E. STEAVENSON, M.D. Cantab., M.R.C.P., in charge of the Electrical Department at St. Bartholomew's Hospital; Physician to the Grosvenor Hospital for Women and Children. London: J. & A. Churchill. 1890.—Electrolysis as a therapeutic measure has been subject to very marked waves of popularity and disfavour. Its advocates have from time to time held out the highest hopes of its wide-reaching benefits, and its opponents have not been slow to condemn it in too sweeping terms. The last few years have witnessed a distinct revival in the popularity of electrolysis, and owing to increased knowledge of electricity and to the use of instruments of remarkable precision to estimate the strength of the currents employed, electrolysis is now applied more exactly than ever before, and it has been tested more thoroughly. Dr. Steavenson has devoted great attention to this subject, and has made himself an authority in this country on it. It is therefore with pleasure that we welcome from him a short and succinct account of his methods and results, and we commend the little work to all surgeons, who will find in it the most approved methods of employing electrolysis. Those who have not used it will find much to set them thinking, and cannot fail to conclude that electrolysis properly employed is a valuable therapeutic measure. We are unable to affirm that Dr. Steavenson does not to some extent ride his hobby too hard; but we owe too much to enthusiasts to reject his really valuable matter on that account.

A Handbook of Diseases of Women. By Dr. F. WINCKEL. Second Edition. Authorised Translation. Edited by THEOPHILUS PARVIN, M.D. Young J. Pentland. 1890.—The second edition of this work will be serviceable to those who require a book of reference. It is an unequal work, its best parts being remarkably good, and bearing the impress of the author's personal observation. Rarities are better described than common maladies, descriptions of some of the latter being decidedly poor. Among these we may mention the chapters on Displacements, embodying most of the old andexploded notions, and,—we are sorry to add, in our judgment—highly questionable directions for treating young girls for these bugbears (pp. 323–34). Generally speaking, the author's treatment is far behind his pathology, and we must again allude to the singularly deficient knowledge of Germans generally on the literature and proper treatment of inversion of the uterus. To the physician in search of references, especially of rarities, this book will prove valuable, though we cannot consider it, for the reasons given above, a safe guide for the student or ordinary practitioner.

An Introduction to Chemical Science. By R. P. WILLIAMS, A.M., and B. P. LASCELLES, M.A., F.C.S. London: Ginn and Co., and Boston, U.S.A. 1889.—The editor (Mr. Lascelles of Harrow School), in the preface, does not offer this work as "a complete *corpus* of chemistry," but as one which "aims only at giving an *outline* of the science, which must be filled up in greater detail" by reference to larger works. For a work of this kind, claimed emphatically to be purely introductory and consisting of some 200 pages only, the "outline" may be judged a fairly comprehensive one. For, amongst the ordinary elements of the science,

space is found for such subjects as Raoult's comparatively recent method for the determination of the molecular weights of substances, photography, chemistry of rocks, diffusion, coal gas industry, &c., all of necessity short accounts, but none the less clearly and simply described. Organic chemistry is assigned twenty pages. Facts are seasoned here and there with theory, and the book concludes with a terse chapter on the important subject of gas volumes and weights, with their attendant calculations. There is more novelty in the plan and style of the book before us than is generally displayed in the ordinary run of text-books, and the young student will find in its pages much that is valuable and useful, plainly and intelligibly put.

New Inventions.

AN ACNE SPUD.

THE accompanying engraving, which is just half the size of the instrument, represents a simple contrivance for pressing out the contents of the sebaceous follicles. It is found from experience that squeezing these follicles by the two thumbs (the common practice) damages the skin and is not effectual. The other means used are either a watch or

common key. These are clumsy, inconvenient, and injurious to the skin. It is claimed for this instrument that the orifice where the pressure is made is large enough to embrace any sebaceous follicle on the face, ears, or neck; that the rim of this orifice is sufficiently obtuse to prevent the skin being damaged by cutting when the pressure is exercised; and that the shaft gives the operator a good grip. The instrument is made by Messrs. Mayer and Meltzer, of Great Portland-street, and can be obtained of J. Bell & Co., 225, Oxford-street. TOM ROBINSON, M.D.

BRUNYEE'S NASCENT CHLORIDE OF AMMONIUM INHALER.

FROM Messrs. S. Maw, Son, and Thompson we have received Brunyee's "Nascent" Chloride of Ammonium Inhaler, which is at once extremely simple in construction and also very portable. It consists of a neat case containing a small spirit lamp, a supply of chloride of ammonium, a mouth-piece, and a tube into which the mouth-piece fits with a cork, and having a small opening at the distal end. A small quantity of chloride of ammonium heated in this tube speedily volatilises, and can be inhaled with the greatest facility. This inhaler can also be employed for menthol and for volatile oils. The simplicity, portability, and price are all that could be desired.

MEDICAL SERVICE IN MODERN WAR.

AT the Royal United Service Institution an interesting lecture was delivered recently by Surgeon-General Marston, M.D., C.B., on the Medical Service in Modern War. In his introductory remarks he pointed out the objection to the work of "international" systems of relief for the sick and wounded in war; that they relieve the belligerents of the cost and responsibility of war, and enable a War Minister or General to prosecute a campaign with greater energy, celerity, and vigour, and "to throw into the purchase of war material the sums saved in not having to provide for the sick and wounded." This, however, does not apply to a National Aid Society, which, if systematised and regulated, must be of great use in diminishing suffering and supplying many of those wants which, on a large scale at least, could not be furnished by a Government establishment. Dr. Marston gave a needful caution, however, against the popular belief that it is possible "by a very limited training to convert any intelligent but uneducated individual into an expert and skilful dresser of wounds, through the instrumentality of a process indissolubly connected with surgical aid to the wounded—viz., antiseptic methods of dressing;" and also against the ridiculous supposition that in war "you can provide luxuries in order to keep pace with a luxurious age, or have a section of a druggist's shop, with its refined method of multiplied medicaments, in the rear of your lightly equipped field hospital." In the field it is most important that, while the medical and hospital service shall be efficient, its transport shall be kept down to the lowest amount; and this is effected under the present consolidated hospital system. "Its objects are to equip corps and hospitals actually in the field with a limited but adequate supply of selected materials, duly arranged; to appropriate medical officers and establishments to positions where they will be most needed in actual warfare—viz, to sick, medical duties, and hospitals—instead of to healthy men of regiments and batteries, and not to waste skilled medical labour, or encumber a moving column with any unnecessary impedimenta, whether these consist of stores or sick; and the pivot of the whole system is to free the fighting force in front as much as possible by relegating the sick and wounded in the direction which they must eventually take, if they prove inefficient—namely, to the rear."

The advantages of this system were clearly shown in the expedition into Afghanistan in 1878, when it was tried for the first time in India, and the results were so satisfactory that the regulations now in force in that country were based upon it. Dr. Marston called attention to the importance of the selection of the proper season, in tropical or semi tropical countries, for military operations, and of the proper and best class of men, as regards age and previous service, to be employed, illustrating his remarks by reference to the Ashanti expedition, the occupation of Cyprus, and the Egyptian campaigns. With regard to the last, he stated that while letters had been received from every country in Europe predicting most disastrous results from ophthalmia—that, in fact, "if such and such measures were not adopted the army would probably become blind in a month," not a single soldier lost his sight from this disease—a remarkable proof of the value of the sanitary precautions adopted on the recommendation of the army medical officers. He also pointed out the necessity for a careful organisation of the hospitals at the base, where there should be ample supplies of every requisite for the treatment of sick and wounded, and the importance of the selection of medical officers for certain posts. "It is the fashion to allege that one man is as good as another; but he is nothing of the kind, and the experience of every day contradicts the allegation." Dr. Marston is of opinion, in which we most cordially concur, that greater facilities should be given to medical officers on return from foreign service to take advantage of the London hospitals "for studying and keeping themselves abreast with advances in knowledge and treatment." He also pointed out the injustice done to medical officers in the distribution of rewards by the lack of recognition of arduous work in the hospitals at the base. In conclusion, he summarised the important results which have followed upon the reorganisation of the service, as shown by the fact that in all the wars that have taken place since the Crimean the losses from disease and wounds have grown less and less, and infective wound disease has been banished from our military hospitals; while the arrangements for the removal of the wounded to the rear and by hospital ships to England have been successful to a degree far beyond expectation. In the discussion which followed, Inspector-General Lawson, Sir T. Crawford, Sir J. Fayrer, Sir W. Mac Cormac, and the chairman, General Sir Donald Stewart, supported for the most part the views advanced by the lecturer, and expressed very favourable opinions of their practical value.

ST. THOMAS'S HOSPITAL.—Mr. J. G. Wainwright, the senior almoner, has been elected to the post of treasurer of this hospital, in the vacancy created by the death of Alderman Stone.

THE LANCET.

LONDON: SATURDAY, MARCH 29, 1890.

PROFESSOR H. C. WOOD, conjointly with Dr. HARE, has communicated a paper upon the Physiological Action of Chloroform to the American *Medical News* of Feb. 22nd. The authors criticise the work of the Hyderabad Commission, and are led to adopt very different views concerning the action exerted by chloroform upon the heart. Moreover, they take exception to an observation made by us in THE LANCET of Jan. 18th, p. 139. We said, in speaking of the Hyderabad Commission: "The practical outcome of the research would appear to be that deaths are not inevitable. They are therefore preventable, and by due care in its administration they may be with certainty avoided." Professor WOOD and his collaborator do not appear to recognise that in using the above words we were expressing the conclusions of the Commission rather than our own. We were careful to add: "The conclusions of the Commission are sweeping, and without abundant evidence cannot be accepted." We have spoken with no uncertain sound from time to time concerning the dangers attending the use of chloroform, dangers which unquestionably in temperate climes manifest themselves through the heart. A careful perusal of the report of the Commission will, we think, amply justify us when we assert the outcome of its teaching is that heart failure does not occur, and deaths are, if ordinary precautions are adopted, quite preventable. We may, however, quote the final words of the Commission in confirmation of this. It says (THE LANCET, Jan. 18th, p. 159): "The Commission has no doubt whatever that if the above rules be followed, chloroform may be given in any case requiring an operation with perfect ease and absolute safety, so as to do good without the risk of evil." The rules, we may remark, are simply those which every competent chloroformist has, since the days of the English Chloroform Committee, known and practised. But the really important part of Professor WOOD'S paper is that in which he narrates his own experiments. The work of Professor WOOD, as that of a tried and skilled experimenter, and one who has investigated the action of chloroform upon the heart more than once, must command the utmost attention. In reviewing modern physiological research on this subject, he justly says it is unanimous in averring that chloroform given diluted to the lower animals kills *quâ* the respiration—i.e., as SNOW has well explained, by cumulation; given in concentrated vapour, it kills by provoking paralytic arrest of the heart. This result also obtains when chloroform is injected into the veins. The heart further after this arrest is found relaxed and incapable of responding to stimulation. Professor WOOD states this result is so constant that he has repeatedly demonstrated it before his class. It has been the custom to destroy dogs in the laboratory by chloroform, and Professor WOOD has "often noticed that death has been produced by primary cardiac arrest." Although possessed of these facts as the result of several years' work in the laboratory, it was determined, upon the publication of the Hyderabad Commission's report, to reinvestigate the matter. This was done with the result that Professor WOOD became more than ever impressed by the fact that chloroform can and does kill directly through primary arrest of the heart. One series of experiments went to show that the heart is *directly affected* and not reflexly, the view now commonly held by experts. A second series proved that although when large doses are given respiration and the heart's action may cease synchronously, yet frequently the cardiac action ceases a perceptible period before the respiration comes to a standstill. The conclusions founded upon these experiments are well worthy of very careful consideration. The authors say "chloroform acts as a powerful depressant poison upon both respiration and circulation; sometimes the influence is most felt at the heart, and death results from cardiac arrest; in other cases the drug paralyses primarily the respiratory centres, while in other instances it seems to act with equal force upon both medulla and heart." And, further, they are led to formulate "that cardiac arrest is specially prone to occur when chloroform is administered rapidly and in a concentrated form." It is also stated by the writers of the paper that they have each witnessed deaths from chloroform in the human subject in which the heart ceased some while before arrest of respiration took place. They suggest that if the report of the Hyderabad Commission is not materially modified in its main contention—viz., that chloroform does not cause primary cardiac arrest—the explanation may be found in some peculiarity of Indian pariah dogs, since European and American dogs unquestionably succumb to primary heart failure when allowed to inhale an unduly strong chloroform vapour.

In THE LANCET of Sept. 21st, 1889, we made the same suggestion as Professor WOOD does now, and pointed out the possibility of the animals experimented on in Hyderabad being peculiarly resistant to the action of chloroform, and also indicated that differences in resisting power might also exist between the inhabitants of different cities. We further indicated variations in temperature as another possible cause of difference in the results of chloroform administration. There may be other factors still unknown, and which may be ascertained by further experiment. We have no doubt that the experiments of the Hyderabad Chloroform Commission and those of Drs. WOOD and HARE were made with equal care, and the apparent discrepancies between the results will in the end only lead to a fuller and more perfect knowledge of the truth. But we have foreseen that it is quite impossible to come to a final conclusion regarding the action of chloroform on man from experiments, however numerous and however careful, on the lower animals. Such experiments are of great value, but the question must also be worked out from the clinical side, and it is for this reason that we have sent out a request for information regarding the results of the administration of anæsthetics. We trust that the difficulty of arriving at exact conclusions without a very large basis of facts will induce all those who can give us information to do so as fully as possible, and also

to remember the proverb, "*Bis dat, qui cito dat.*" When we have received these returns we purpose to have them collated, and to devote careful consideration to the whole question of the action of anæsthetics, from its clinical as well as its experimental side.

IN his charge to the grand jury at Chester, Mr. Justice WILLS alluded to the Crewe murder case, on which he dwelt at great length, and made some strong remarks on the conduct of the coroner, Mr. HENRY CHURTON, in declining to receive certain statements made by the prisoners now under sentence of death because the police officers in charge of the case, acting under the orders of the chief constable, did not produce the prisoners at the inquest. The learned judge remarked that "the office of coroner was an important one, and his function was an important one. The coroner had also one advantage from a certain point of view—namely, that being fettered by no precise rules of evidence, and bound to collect as far as he could all information and knowledge of disasters from neighbours and others who could throw any light upon the cause of death, where death had taken place under suspicious circumstances he could oftentimes collect evidence, facts, and statements which, whether or not they might ultimately be capable of being turned into evidence against the parties who were to be put upon their trial, were often very valuable as supplying material for investigation by the police and as affording clues which might lead to successful inquiry. If the coroner rejected evidence which lay before him, on the supposition that he was in the position of a judge who had to try the prisoner, and that the same wide rules of exclusion of evidence which might act against a particular individual in the dock he also could exclude upon legal grounds, he would throw away a good deal of the remaining usefulness of that institution. The coroner's inquisition could not be too thoroughly understood. It amounted to nothing more than the finding of a true bill by a grand jury. It put individuals, who ought to answer in suspicious circumstances for what they had done, or were supposed to have done, upon their trial, and led to proper investigations preventing the hushing up of matters of this kind." The common sense of these remarks by Mr. Justice WILLS will be apparent to all who have had experience of coroners' inquests, whether as coroners, witnesses, or suspected persons. It has always been contended in THE LANCET that the main object of an inquest is to ascertain the cause of death. The coroner has no power to compel the police to bring a prisoner before him, and in a case like the one under consideration we agree with the learned judge that it would have been indiscreet had they done so. In the face of confession of the crime by the lads it is clear the coroner must have warned them that any evidence given by them might be used against them at their trial, and the practical outcome would have been either that, yielding to advice, they would have declined to say anything, when their presence in court would have been simply a painful spectacle, or if they loosened their tongues they might have said what in justice could never be demanded of a person suspected of the crime of murder. Further than this, the Coroner's Court is one of first instance, where the strict rules of law are not enforced. Hearsay statements can be taken which, though not admissible at a criminal trial, are often of the greatest importance, not of proving certain facts by themselves, but in leading to the discovery of facts which may turn out of the highest import. Mr. Justice WILLS also remarked upon the absence of the coroner's depositions, the finding of the inquest jury having been an open one, as likely to cause some inconvenience at the trial, which fortunately, however, was not the case. His remarks will serve as a useful guide to coroners in future, not only in sensational cases, but in those which end in the coroner's court—a large and important number. It is remarkable that while many persons in England are clamouring for the abolition of the coroner's court as an antiquated and useless institution, many others in Scotland are equally clamorous for the introduction of coroners' inquests there, the Procurator Fiscal's inquiry being by no means free from defects of its own. We have it now from one of our ablest judges that the office of coroner and the function he exercises are not obsolete but important. There must always be a certain number of deaths in which medical certificates cannot with propriety be given, and in which it will be impossible at first to say whether the death is from natural causes, from accident, from neglect, or foul play. The coroner's inquest properly conducted is admirably adapted to ensure a thoroughly searching inquiry, and the coroner is amply provided with every means for securing this. That many inquests are conducted in a very slovenly manner must be admitted, but this is an argument rather in favour of reform than total abolition.

THE problems presented by the exuberant growth of population have an irresistible attraction for minds having "a speculative turn," but happily they have not at present assumed among ourselves a practical aspect. It is indeed very generally taken for granted that the practical difficulty, when it does occur, will arise from scarcity of food, and that this scarcity will result from the multiplication of mouths out of proportion to the increase of provision, or even to the possibilities of production. It is, however, very certain that the actual facts of the case are by no means so simple as to be covered by this bald statement of the conditions which lie at the root of the difficulty. Food is beyond doubt the necessary which, though always and everywhere indispensable, is the most liable to run short. But in modern societies it is discomfort rather than famine which in practice puts a limit to the growth of population. This fact was strikingly brought out in the paper which Dr. OGLE recently read before the Statistical Society upon the marriage rate. It has been repeatedly laid down by writers of the highest repute upon political economy that marriages increase among the labouring classes in seasons when the price of bread is low. Mr. JOHN STUART MILL, Professor FAWCETT, and Dr. FARR were all quoted in Dr. OGLE'S paper to this effect. But against this weight of authority the writer of the paper was able to show that in our own population the rule is reversed. An analysis of seventy years past

brought out the surprising result that years of high-priced wheat have been, with few exceptions, years of high marriage-rates; and, on the contrary, that sympathetic depression has in other years attended both the price of food and the number of marriages. Upon the simple view of the case to which we have above referred, the paradox is unintelligible, but the explanation which Dr. OGLE has suggested may be accepted as being almost certainly correct. He points out that, circumstanced as our community is, dependent, that is to say, to an almost unprecedented extent, upon industries other than agricultural, the price of corn with us affords an inverse rather than a direct measure of the prosperity of our wage-earning classes. So large a proportion of our wheat is in any circumstances brought from abroad that the fluctuations in its price are mainly due to the varying cost of freights, and hence periods of high freights are also periods of high-priced wheat. Now freights go up when trade is brisk, and fall when trade flags. Hence it happens that periods of high freights and consequently periods of high-priced corn are periods also of great industrial activity, and therefore periods when our great masses of working people are apt to take sanguine views of life and are specially capable also of assuming the responsibilities which marriage involves.

It is obvious how widely unlike such a case is to the state of society in which famine hangs upon the skirts of the population, seizing and devouring every straggler who proves unequal to the march. There is indeed a form of the destroyer which is even more fierce than famine. In savage societies the problem of population is, How many can be rescued from the ravages of war? In Asiatic communities of the present day it is, How many can be fed? In Europe it is, How many can be fed, lodged, and clothed? while in those favoured lands where wealth is most abundant and most diffused it is, How many can be provided for? the provision contemplated including not only the bare necessaries, but also a measure, greater or less, of the amenities of life. At every successive stage the problem, though becoming more complex, becomes in the same proportion less terrible, and we, for our part, refuse to accept the helpless conclusion at which many statisticians seem disposed to arrive—namely, that advancing civilisation is leading human society irresistibly to the brink of a precipice over which it is destined to fall into the jaws of irremediable destruction. Dr. OGLE'S figures show, by the considerable fluctuations which have actually occurred in the marriage-rate from year to year, that a community like our own is keenly sensitive to the accurate adjustment of the burden of subsistence to the means of supporting it, and we decline to believe that the future will in this respect go back upon the past. We quite admit that a period of extraordinary prosperity—the past fifty years—has seen a great increase in our population, and that the growth, though not so rapid now as it has been, is still continued. But we remember also that the prosperity has not yet passed away, and that the augmentation in our numbers has been more than paralleled by a concomitant amelioration in the condition of the masses of our population. This, in an age of fashionable pessimism, is perhaps a bold thing to say; but it is true, and therefore we say it, and we go on to discover in it omens fraught with meaning for the future and of the happiest augury withal.

WE seem at length likely to have an inquiry into Hospitals. Lord SANDHURST has obtained a promise from Viscount CRANBROOK that the Government will heartily support him if he moves for a Select Committee to inquire—

"With regard to all hospitals, provident and other dispensaries, and charitable institutions within the metropolitan area for the care or treatment of the sick poor which possess real property or invested personal property in the nature of endowment of a permanent or temporary kind, the committee to receive, if they think fit, evidence tendered by the authorities of voluntary institutions for like purposes, or with their consent in relation to such institutions; and further to inquire and report what amount of accommodation for the sick is provided by rate and the management thereof."

Lord SANDHURST has promised that on an early day he will move for such a committee, and doubtless it will soon be an accomplished fact. We must express our regret that a Royal Commission has not been granted. Considering the wide nature of the inquiry, the voluntary character of most of the hospitals, the great social importance of the questions involved, and the absence in them of political interest, we cannot but be surprised that the Government did not see their way to a Royal Commission, consisting of men of all parties and of no party, and of some men out of Parliament altogether. We do not know whether the Government is still inflexible in its preference for a Select Committee. If not, we trust that even yet they will agree to a Royal Commission. They can have no mere party or political interest in this matter. Lord CRANBROOK'S past achievements in the way of providing hospitals for the poor and the heartiness of his assent to an inquiry are guarantees enough of his earnestness and his wish to make the inquiry, not only a real one, but one which will carry weight with the public. We venture to hope that Lord SANDHURST will ask for, and that the Government will grant, the instrument of inquiry which has been desired by all the parties interested in this great subject. As Lord CRANBROOK hinted last year, such an inquiry into institutions that are essentially voluntary in character is a matter of some delicacy. It should especially be removed from all appearances of a political bias. This will be much more effectually secured by a Royal Commission than by a committee of either House, however impartially constituted. We shall have to wait for Lord SANDHURST'S speech on the motion before knowing exactly the scope of the inquiry which he wishes to make. But it seems pretty wide and to have no other limit than that of the consent of the authorities of the voluntary institutions. We can only express the hope that all parties interested in hospitals will endeavour to make this inquiry real and thorough, while at the same time respecting the main purpose and spirit of our hospitals and dispensaries. The governing bodies of these institutions especially will do great service by consenting at once to give all the information they can to the proposed inquiry both as to the property they administer and the precautions

taken in administering it in order to do the greatest amount of good and the least amount of harm. Those who are impressed with the harm done by the indiscriminate and wholesale relief given by hospitals and dispensaries will do well to have their evidence thoroughly prepared. The medical profession is deeply interested in this movement. It is so in two opposite ways. It is concerned in the maintenance of hospitals, unimpaired in efficiency and comfort, as resorts for urgent cases needing high medical and surgical skill and elaborate attention and nursing. Living, as we do, in the metropolitan area, to which alone this inquiry applies, with its five millions of human beings, with less of local sympathy and oversight than obtains in provincial communities, the reduction of hospital comforts and accommodation for really bad cases would be a human calamity and discredit, which none would feel and see so much as medical men. It is one of the most painful experiences to see physical misery in straitened homes without adequate medical or nursing help. As Schools of Medicine, too, in which its grandest lessons are taught, the medical profession is deeply anxious for the maintenance of hospitals. On the other hand, medical men are equally concerned in their wise and prudent administration and in securing that their benefits shall not be made so cheap as to pauperise those who resort to them, and to bring medical service into contempt.

Annotations.

"Ne quid nimis."

DEGREES FOR LONDON MEDICAL STUDENTS.

THE important question of the method by which pass degrees in Medicine can be conferred on average medical students in the London schools is about to enter on another phase. The Committee of Delegates appointed by the two Royal Colleges recommend that, for a pass M.B. degree, the strictly professional examinations be under a Conjoint Board of the University of London and the Royal Colleges, whilst the University alone should take charge of the Matriculation and the Preliminary Scientific Examinations. As this recommendation will probably obtain the assent of the authorities of the Royal Colleges, it will be necessary to consider how far such an arrangement will benefit the average London medical student. We are everywhere told that it is the Matriculation and Preliminary Scientific Examinations, especially the latter, which constitute the especial difficulties in the way of students desirous of obtaining the medical degrees at the University of London; so that if the Senate of the University maintain these examinations at their present standard, the acceptance of the examinations at the Conjoint Board in Anatomy, Physiology, Medicine, Surgery, and Obstetric Medicine will only lower the University standard in professional subjects, without being really an efficient remedy for the existing evil. The conferences between University and King's Colleges and the University of London are still being held, but appear as if likely to break down on the questions of representation and the giving of honours degrees. The teaching colleges must have the power of conferring degrees in honours as well as mere pass degrees, unless their students on the "teaching side" now offered by the University are to be inferior in status to the general body of students, and must have an effective representation on the body charged with the work which would be the special care of a new Teaching University, or of the teaching side of the existing University, if it is to adapt itself to local needs. The past history of the University of London and the traditions of an Imperial examining board are too firmly woven around the Senate for them to make these concessions with a good grace, and without them any would be unworkable. Moreover, Convocation would doubtless object to such concessions. The medical graduates must bear in mind that when the proposals of the Senate come before Convocation, whether the standard of medical degrees be lowered or whether it be maintained at its present level, the new Charter will have to be accepted or rejected *en bloc;* for although any amount of discussion may take place, the privileges of Convocation do not include the power to modify any clauses which the Senate may put forward as a basis for the new Charter.

THE EFFECT OF ALCOHOL ON THE FUNCTION OF THE STOMACH IN HEALTHY PEOPLE.

DR. BLUMENAU, in a preliminary communication to the Russian medical journal *Vrach*, publishes certain conclusions he draws from his experiments on the effect of alcohol on the function of the stomach in healthy people. The author says that in the beginning of the digestive process the functional activity of the gastric juice, the general acidity, as well as the amount of hydrochloric acid and the corresponding digestive power of the juice, are diminished; and in people who are not used to alcohol this decrease is even more distinct. The stronger the solution of alcohol, the greater is its effect. During the first three hours or a little less after its consumption the digestion is slower, but after that it becomes much quicker, to compensate, as it were, for the previous loss of time. The quantity of acid in general, and of that of hydrochloric acid in particular, rises from 1½ to 2 per cent. above the normal, and the gastric juice has consequently a greater digestive power in the later hours. The secretion of the gastric juice also lasts longer and is more ample when alcohol is consumed. The activity of the pepsine remains about the same, although the coagulation of milk seems to be somewhat slower at the beginning. The motor power of the stomach and its capacity for absorption are diminished in direct proportion to the strength of the alcoholic solution.

UNCERTIFICATED APOTHECARIES.

THE action recently tried by the County Court judge of Birmingham, in which the Apothecaries' Society obtained a judgment against a herbalist named Welch under the Apothecaries Act, came a few days ago before the Queen's Bench Division on appeal. The case seems to have been a very clear one. The herbalist, not holding an apothecary's licence, had made a practice of receiving patients in consultation, prescribing medicine according to his view of their maladies, and then dispensing his own prescriptions. It is strange that, in this state of facts, Mr. Welch could not remain content with the penalty inflicted in the local court at Birmingham, but must needs bring his matter on appeal to London, and court the additional publicity and additional expense of an application to the Divisional Court. In attempting to sustain the appeal, his counsel was driven to have recourse to such a pitiful quibble as that the defendant had not acted as an apothecary, because the patient, whose case was put forward as a test case, was not actually invalided at the time, but had only feigned sickness for the purpose of obtaining evidence to support the contemplated proceedings. The Court very properly disregarded this learned trifling, the Master of the Rolls, who delivered the judgment, saying: "It was necessary to ascertain whether the defendant had confined

himself to that which a herbalist might do, or had exceeded that and done something which only a certificated apothecary might do. In this case the defendant did not give the customer a medicine asked for, but prescribed according to his own judgment, and gave him the medicine which he thought right for the disease which he supposed the customer was suffering from. Considering that there was evidence that he did this on three other occasions, the County Court judge was obliged to infer that it was his practice to advise people who came in, to examine them, to pretend to come to a judgment or to come to a judgment, and then to prescribe medicine. Was that going beyond the duties of a herbalist? He [the Master of the Rolls] distinctly came to the conclusion that there was nothing in any Act of Parliament, which entitled a herbalist to do that, and the County Court judge was right in his decision. The defendant here had acted as an apothecary, and had not the certificate of competency. He had done this not in a casual way, but as a part of his business. No doubt there were some herbalists who were perfectly honest and respectable people, but there were also herbalists who carried on a most dangerous business—a secret, criminal, abominable, and wicked business—and they were much to be guarded against. In this case the judge below was perfectly justified in holding that the defendant acted as an apothecary, and the appeal must be dismissed." Lord Justice Fry concurred, and the appeal was dismissed with costs. We trust that this judgment will enlighten Mr. Welch as to the legitimate scope of a herbalist's practice.

HYDRASTININE IN UTERINE HÆMORRHAGE.

IN the *Therapeutischen Monatshefte* for January last there appears an interesting paper by Dr. Edmund Falk on the Use of Hydrastinine in Uterine Hæmorrhage. The hydrastis Canadensis has been employed for a long time, especially in America, as a remedial agent, although the pharmacological value of its various constituents has not been thoroughly tested in this country. Its active principle, hydrastin, consists of white prismatic crystals, somewhat resembling strychnia in appearance, insoluble in water, but soluble in alcohol, chloroform, and ether. Hydrastin when oxidised is decomposed into hydrastinine as a base, and an acid—opianic acid. Hydrastinine is very sparingly soluble in warm water, but it unites with acids forming soluble salts. Dr. Falk experimented with the hydrochlorate on account of its easy solubility, employing subcutaneously a 10 per cent. solution. He contrasted the effects of hydrastin and hydrastinine on animals, and found that the former caused paralysis of the heart, but the latter acted as a cardiac stimulant, and produced strong contractions of the smaller bloodvessels. These features indicated its therapeutical importance, and led him to employ it in cases of endometritis and uterine fibroid tumours, in which excessive bleeding was a prominent symptom. He found it more efficient in restraining the hæmorrhage than ergotine.

THE FISH-SUPPLY OF THE METROPOLIS.

MR. J. LAWRENCE HAMILTON has contributed to the *County Council Gazette* an article containing suggestions for some most necessary reforms in the market rules of the metropolis relating to the distribution of fish for food. The evils of which he complains are so glaring that it is difficult to understand how they can have arisen, or to believe that public spirit in the metropolis can be at so low an ebb as that such flagrant abuses should not be immediately reformed. But, unhappily, they are also of so long standing that it is impossible to avoid the conclusion that nothing less than a most strenuous effort will suffice to bring about their reform. Among the strangest of the phenomena which Billingsgate affords is the circumstance that it serves as the emporium for the sale of fish, not only for the metropolis, but also for the whole country, including the fishing towns upon our coasts, so that fish which might with mutual advantage to fisherman and customer be sold where it is caught—in the coast town, for example—is nevertheless brought to London and sent back again to the local fishmonger, to the great detriment of the stock and the advantage only of the auctioneer or the fish broker in the metropolitan market. It is hardly necessary to add that a system so thoroughly bad depends for its maintenance upon financial conditions only. The fishermen are bound to particular dealers of whom they have borrowed money, and these dealers, in order that they may maintain a lucrative monopoly, place these absurd conditions on the course of the trade. It is not only by becoming the focus of a thoroughly bad system of trading that Billingsgate has inflicted injury upon the fish industry of the United Kingdom. Mr. Hamilton points out, with irresistible force, that its accommodation is in every respect insufficient. Its river frontage is too narrow, its area too contracted, its approaches are so constricted that the market has to be practically closed shortly after nine o'clock in the morning. To these unavoidable and irremediable faults it adds defects of construction which should alone suffice to make it impossible as a fish market in its present state. The consequence is appalling waste of food stuffs, and the startling spectacle of food purveyors destroying food supplies wholesale through the most stupid ignorance and the blindest greed. Here is in truth an Augean stable, but where is Hercules?

SCLEREMA IN THE ADULT AND ITS PATHOGENESIS.

DR. BOCK reports in *La Clinique* a case of scleroma, in which the etiology was very plainly shown. The patient was a girl aged nineteen, with no hereditary tendency to skin disease though highly sensitive and somewhat hysterical. She was stated also to be subject to violent fits of rage followed by nervous attacks (*attaques de nerfs*), and she was said to have suffered once from a cataleptic fit. After sleeping one night with the upper part of her body exposed to the draught from an open window she noticed some induration and a stiffness on attempting to use the facial muscles. When seen a few days subsequently as an out-patient at the St. Pierre Hospital the whole of the skin of the face and neck, with the exception of that of the ears and the hairy scalp, was hard, white, and œdematous, and incapable of being depressed; this condition extended to the upper part of the arms and to below the breasts. The only subjective sensation, however, was severe headache, which, indeed, was what had induced the girl to seek advice. By means of frequent frictions, massage, simple, sulphur, and Turkish baths, a complete cure was effected in a few months, no atrophic or cicatricial traces being left. In view of this complete disappearance of the morbid condition, Dr. Bock is disposed to regard the case as analogous to the muscular contractions met with in hysterical or neurotic subjects, the contraction being limited to the cutaneous and vascular muscles. Dr. Bock refers to two somewhat similar cases of scleroderma recently reported by Dr. Brambilla in an Italian medical journal, both of which were probably due to exposure to cold. The patients were females, and were cured, the treatment adopted being the production of copious diaphoresis and the internal use of salicylate of soda and tonics. These cases are not, however, always so satisfactory; for, according to the statements of Eichhorst and Gamberini, it would seem that where there is any serious morbid hereditary taint, chronic interstitial inflammation

of the connective tissue may occur, ending in an atrophic or permanently contracted condition of the skin. Some cases, too, have terminated fatally, phthisis or marasmus being the cause. As to the nature of the affection of the skin, it would appear to be uncertain whether it should be regarded as an affection of the trophic nerves or of the cutaneous capillaries.

THE WORCESTERSHIRE HEALTH OFFICER.

THE Worcestershire County Council, before deciding to appoint a county medical officer of health, dealt with the question of the need and expediency of making such an appointment in a report on which we recently commented, and which showed that the subject had been carefully considered, and that the decision arrived at was the result of a deliberate opinion that the work of the Council could not be properly performed except with the aid of such an officer. We therefore regret to find that some of their constituents in Balsall Heath, Moseley, and King's Heath, should be organising an opposition to the Council in this matter. At a public meeting held for this purpose on March 11th, a letter was read from Mr. G. W. Hastings, M.P., urging the meeting to hesitate before they bound themselves to an attitude of antagonism to the Council, and setting forth the grounds on which it was desirable that a county officer should be appointed; but the appeal passed unheeded, and resolutions which had been prepared in advance, and which were adverse to the decision of the Council, were passed. We only now recur to the matter because one of Mr. Hastings's arguments in favour of a county health officer seems to us a little strained. Recalling the provisions of the 17th section of the Local Government Act of 1888, to the effect that the services of such a county officer may be made available for the purposes of District Councils, he implies that the existing local health officers may be got rid of by degrees, and that the county officer may act both as local and as central officer. We much doubt whether this plan will ever be extensively adopted. Objection has already been raised to it on the ground that the county officer's local work would, under such conditions, come to be supervised by himself as a central officer; and, apart from this, we feel convinced that in most counties the county health officer will before long find enough to do without undertaking detailed local work. Besides which, the section we refer to only admits of the plan being adopted by District Councils, and these bodies have yet to be created.

PROFESSOR STEWART'S LECTURES AT THE ROYAL COLLEGE OF SURGEONS.

PROFESSOR STEWART completed on March 21st a series of nine lectures in the theatre of the College on the subject of "Phosphorescent Organs and Colour in Nature," embracing a survey of luminous plants and animals; the colour of plants and animals; the nature of colour; colour due to pigments and to interference; the general use and distribution of colour in plants and animals; relation of colour to sex; the modifications of colour induced by heat, light, season, locality, food, and disease; the rapid change of colour in animals; changes of colour in formed hair and feathers; change of colour by partial loss of feathers; "protective resemblance" by form, colour, and foreign bodies; recognition marks; alluring resemblance; warning and dazzling colours; and the "mimicry" of species specially protected by species not so protected, as well as between protected species. Professor Stewart, by his lucidity of style and demonstrative skill, surrounded each and all of these subjects with great interest. He rapidly depicted with coloured chalk the essential characteristics of various plants and animals, rendering their further study by other observers more easy. He offered some very ingenious explanations for variations of colour, habit, and conformation in the animal world; and in an attractive and humorous way suggested others. Professor Stewart delivers his lectures *extempore*. Each lecture was abundantly illustrated by specimens from the Hunterian Museum, and care was taken to point out to his audience any deficiencies in that collection, with a view to yet further perfect its utility. It seems a pity that any lecturer so modest, yet so erudite, should not enhance the value of his lectures by publishing them.

THE PORT OF LONDON.

THE last half-yearly report by Dr. Collingridge to the Port of London Sanitary Committee shows the steady progress of work which aims at improving the health of those who live so much afloat and who enter our great river highway. During the latter half of 1889 the number of vessels inspected was 9683, or an average of 62 on each working day; and it is stated that, apart from such processes as fumigations, structural alterations were carried out on 131 different vessels. These alterations are willingly carried out when the need for them is indicated, and this leads Dr. Collingridge to suggest that if the plans of vessels were submitted to the sanitary authorities of the port in which they are built, much subsequent alteration and consequent expense would be avoided. The Infectious Disease (Notification) Act will secure for the port information as to infectious disease on board the sailing barges which heretofore have escaped the provisions of the Order as to this, because, since they trade wholly within the port limits, they could not be held to "arrive within the port." An account is given in the report of the action taken with regard to the several cases of infectious fever detected and reported on, and as to the dealing with such articles as infected clothing. The working of the Canal Boats Acts, 1877 and 1884, is next referred to. The "family boat" is happily disappearing, a matter which is of the utmost importance in connexion with the health, education, and moral training of young children. On the whole, the records which are periodically given of current work and sanitary administration in the port of London may be regarded as typical of that action which is so much needed in the interests of those who earn their livelihood in the shipping trade, and who are compelled to travel much by sea.

THE TREATMENT OF ALCOHOLISM.

THE determination of the best methods of dealing with cases of acute and chronic alcoholism has always formed an attractive subject for research. The latest contribution is in the form of a medico-social study upon alcoholism by Dr. E. Monin, published by Octave Doin. Following the usual curious foreign custom, a specimen chapter from the book appears in the *Revue de Thérapeutique*. This enables us to gather Dr. E. Monin's views of treatment of both acute and chronic alcoholism. For the former he recommends rest in bed and emetics; but, recognising the occasional difficulty of provoking vomiting, he advocates also the employment of tea, coffee, and acetate of ammonium. He believes that enemata of coffee, combined with friction and massage, have frequently averted conditions of collapse which might otherwise have proved fatal. In severe cases he is in accordance with English practice in the employment of the stomach pump or of Faucher's tube. Capsicum and cherry laurel are often of use in cases of coma. For the sleeplessness, cramps, and nightmare of acute "absinthism" large doses of chloral and of opium are recommended. The treatment of delirium tremens with saline purgatives, warm baths, and laudanum, together with milk and beef-tea, scarcely appears to reco-

gnise the importance of nutritive measures. During the convalescent stage the employment of caffeine, quassia, and strychnine present nothing contrary to custom. The difficulty of dealing with chronic alcoholism is to be met, according to Dr. Monin by nutrition, milk diet, and open air, with quinine and tonics. While speaking highly of calumba and quassia, of asafœtida and bromides, of camphor and ether, and of phosphide of zinc, more stress is laid upon the value of strychnine in heroic doses. Numerous methods of employing nux vomica are given in detail; and, in conclusion, some of the troublesome accompaniments of alcoholism come under review. Presuming a possible analogy between acute alcoholic cirrhosis and the toxic action of phosphorus, Dr. E. Monin successfully treated one case with full doses of turpentine by the mouth, and he suggests that this treatment might be found of general service in similar cases.

THE LONDON HOSPITAL.

THE House Committee of the London Hospital have for some time had under consideration the need for improving the sanitary condition of this institution. Their attention was directed to the subject by illness occurring among the nurses, and by evidence that patients made less satisfactory progress than could have been desired. The committee therefore consulted Dr. Louis Parkes, who has made a very exhaustive examination of the premises, and whose report contains recommendations which the committee, with the aid of their able architect, Mr. Rowland Plumbe, are about to carry into effect. The whole of the drainage is to be reconstructed, the old brick drains removed, and an entirely new system introduced. The waterclosets, which at the present time open directly into the wards, will be rearranged, and turrets built outside the wards which will contain the new apparatus replacing the old. In addition to the alterations we have mentioned, the ventilation of the wards is to be materially improved, and the floors and wall surfaces are to be so treated that a better state of cleanliness can be maintained. The cost of these alterations is considerable, but we are satisfied that the committee are acting wisely in putting the hospital into as complete a hygienic condition as possible, and we trust that the liberality of the public will supply the means to defray the expense incurred.

THE CREWE PARRICIDES.

THE lads Richard and George Davies, aged eighteen and sixteen respectively, who were tried at the late Chester Assizes before Mr. Justice Wills for the murder of their father on Jan. 25th, were found guilty. The jury added to their verdict a recommendation to mercy on the grounds of the youth of the convicts. The whole case, from its inception to its termination, has furnished several important forensic features. In the first place, there are the facts upon which the finding of the jury was founded. These were both direct and circumstantial. There could scarcely be a doubt that the deceased died from intentional violence at the hands of some one or more persons. The theory of the wounds being possibly caused by the deceased falling from the trap in which he was riding, though ingenious, was not pressed by the counsel for the defence. Dr. Matthews, who made the post-mortem examination, admitted the bare possibility of such a result, but considered it improbable. The circumstances which led up to the fatal event pointed strongly to the guilt of the accused, and that guilt could not be called into question after the separate confessions of complicity in the murder made by each. We entirely agree with Mr. Justice Wills that the alleged motives for the criminal act were not adequate to justify it. It was proved in evidence that the deceased was a bad husband, and behaved unkindly to his children. Smarting under the cruelty and indignity cast upon them by their father, and goaded to desperation at the ill-usage inflicted on their mother, the wretched youths, with cool determination, or, as the law terms it, malice aforethought, decided to slay their father. This is one alleged reason why the Royal prerogative may not unjustly be extended to the convicts; but, taken alone, we could not conscientiously endorse it. To our minds, there is another and more cogent one—viz., the moral evil of their natures, for which they can scarcely be held entirely responsible. Brought up under the influence of a father who not only denied them physical comfort, but actually scoffed at and forbade religious instruction on the Sabbath, it is no wonder that they failed to make the Commandments the articles of their belief and the guide to their daily lives. Their age, too, though such as to in no way relieve them from the responsibility of judging between evil and good and acting in accordance with the knowledge, is still that of impulsive youth, wanting the discretion and judgment of riper years. We trust that the Home Secretary will see his way to advise the Crown to commute the terrible sentence under which they lie. It appears that Dr. Matthews made a second post-mortem examination at the instance of the police without the order or permission of the coroner. The latter complained of this as an illegal act. No doubt during the progress of an inquiry the body is in the possession of the coroner. Nevertheless, when once a medical man has received a commission from a coroner to make a post-mortem examination, we cannot see that it is illegal to complete the examination on a second occasion, even though it be done on the *ex-parte* suggestion of the police. The Act does not specify that the examination shall be made and terminated at any particular time. Within the interval of the commission of the crime and the finding of the jury at the assizes, a regrettable conflict arose between the coroner and the police as regards the attendance of the boys at the inquisition. This point, however, is discussed in another column.

CHEYNE-STOKES BREATHING.

THE remarkable respiratory phenomenon, for the recognition and description of which medical science is indebted to the two great Dublin physicians Dr. Cheyne and Dr. Stokes, has always excited much interest and no little speculation. It may be remembered that Stokes ascribed it to fatty degeneration of the heart, considered it of fatal prognostic significance, and pointed out that although Dr. Cheyne's patient died of apoplexy, yet he had also the above cardiac condition. Traube did much to dispel the idea of its entire dependence on cardiac changes, showing clearly, as has frequently been shown since, that it was quite as much a symptom of cerebral disease alone. Of all the theories as to its mechanism the most rational appears to be that of Filehne, who advanced the question a stage beyond where Traube had left it. For the last-named distinguished authority was content to refer it to variations in the arterial blood-supply of the medulla, whilst Filehne contended that the phenomenon could be best explained by assuming a difference in the relative excitability of the vaso-motor centre on the one hand, and the respiratory centre on the other. If from any cause a condition of arterial spasm were induced by asphyxia, so as to produce anæmia of the medulla, this anæmia, and not the primary asphyxia, would succeed in exciting the dormant respiratory centre to violent and excessive action. The respirations thus initiated would proceed with increasing depth and frequency, until the blood surcharged with oxygen would temporarily relieve the vascular spasm, and, at the same time, annul the excitability of the respiratory centre, so that a period of apnœa would result, lasting until the asphyxial state once

more excited its action on the centres concerned. If this doctrine be accepted, it will serve to harmonise the many conditions—circulatory, nervous, and toxic—under which Cheyne-Stokes breathing is known to occur. Of equal interest is the practical importance of the phenomenon—viz., its prognostic significance—which Dr. Stokes thought so serious. The question was raised by Dr. Stephen Mackenzie at a recent meeting of the Clinical Society, and has elicited some interesting experiences contributed to our columns, from which it would appear that cases have been known to recover, although they must form but a small minority. It should also be borne in mind that in meningitis and other cerebral affections the breathing may be irregular, even with apnœal periods; but, as Biot showed, such do not conform to the classical type of Cheyne-Stokes breathing, of which the regular rhythm is so marked a feature.

MR. WILLIAM CADGE AND THE FREEDOM OF NORWICH.

ON Friday, March 22nd, a great honour was paid to a distinguished member of our profession by the Town Council of Norwich. The freedom of that ancient city was conferred on Mr. Cadge in consideration of his long services, already extending over thirty-two years, and of his munificent gift, at first anonymous, of £10,000 towards the fine new Norwich Hospital. The list of *liberi homines* of Norwich includes such names as Sir Robert Walpole, William Pitt, the Duke of Wellington, and Lord Nelson. We consider that the list will only gain in brilliance and in fame by the latest addition to it of Mr. Cadge. He represents another art and another kind of service to humanity than these illustrious men; one indeed hitherto less honoured, but one not less high or less needful to the human race. Mr. Cadge still continues the gift of his skill and his unfailing kindness to the poor of Norfolk, and his practice still well sustains the credit of the city of Caius, of Sir Thomas Browne, of Martineau, of Rigby, of Crosse, and others. The casket containing this great honour is of solid silver, enamel and repoussée work, ornamented in severe classic style, with representations of Hygeia, Philanthropy, the arms of Norwich, Mr. Cadge's arms, &c. On one side is the following inscription:—

> Presented by the Mayor, Sheriff, Members for the City, Magistrates, and Corporation of Norwich, together with the honorary freedom of same city, to William Cadge, Esq., F.R.C.S. Eng., in recognition of his eminent services as Surgeon to the Norfolk and Norwich Hospital during the last thirty-two years, and in gratitude for his noble gift of £10,000 to that institution.
> Norwich, March, 1890.

The recognition of such lives as that of Mr. Cadge is in the highest degree honourable to the community which originates it. We readily understand Mr. Cadge when he tells us that the very fear of the ordeal of publicity was one of the motives which induced him to attempt anonymity in regard to his generous gift. But he will survive the ordeal of the 22nd, and we can only hope that he will long continue to serve the hospital which he loves so much, and whose museum is so rich in the evidence of his skill.

INCREASE OF OUT-PATIENTS IN BIRMINGHAM.

MR. JAFFRAY, in the absence of Lord Aylesford, presided at the 110th annual meeting of governors of the General Hospital, and made an able speech on the work done by the hospital. He said the work done was very large, especially in the out-patient department. *The increase of the out-patient department was altogether abnormal*, the number, 45,950, being an increase of 4437 on the previous year. No less than 31,758 were admitted free—i.e., without tickets. This statement was received with applause. But we think it should have excited grave misgiving among the governors as to the soundness of their philanthropy. The Hospital Saturday contributions have been the subject of much boast in Birmingham. But they do not keep pace with the growth of this pauperising branch of hospital work. Here is what Mr. Jaffray says on that subject. "When the claims of the General Hospital were presented by the committee of the Hospital Saturday Fund to their constituents, they might call attention to the fact that, large and acceptable as their contribution was to it, the free administration of relief was considerably out of proportion even to that handsome donation which was received from year to year. There was no special reason that he knew of for the increase. It had wholly taken place with reference to the free admissions." We can only hope that the committee of investigation will throw light on this grave matter.

VAGINAL INJECTIONS OF CORROSIVE SUBLIMATE AND NAPHTHOL.

DR. RAFAEL WEISS, writing in *El Progreso Medico*, a Cuban medical journal, mentions a form of poisoning by perchloride of mercury when frequently used, even in very weak solutions (1 to 5000 or 6000) after severe post-partum hæmorrhage, which requires the complete cessation of the mercurial salt. It is characterised by diarrhœa, causing exceedingly fetid stools every few minutes, with severe colic and tenesmus, but without any stomatitis or albuminuria. According to the same writer, naphthol solutions when used as injections in obstetric practice not infrequently give rise to very severe smarting and burning pains, lasting for half an hour or so; and this unpleasant property has caused many practitioners to abandon the use of this substance for vaginal injections altogether. The inconvenience may, however, be entirely obviated by introducing iodoform in powder so as to cover the vaginal mucous membrane, and especially any lacerations that may exist, immediately after the naphthol injection.

THE RIVER LEA.

THE Tottenham Local Board has not had time to perfect their new drainage scheme, in reference to which they are now applying to Parliament, and consequently the Hackney District Board of Works are desirous of extending the period of time during which Tottenham is permitted to drain into the metropolitan sewers. The Hackney Board has therefore, through a deputation, represented to the Main Drainage Committee of the London County Council the need for allowing the present arrangements to continue for the present. We do not doubt that this sanction will be given, for it would be disastrous if the Lea were to be again polluted as before.

INTERNATIONAL MEDICAL CONGRESS, 1890.

A SHORT time since, in compliance with a request by the officers of the Berlin Congress, a committee was formed in London for the purpose of making known as widely as possible in England the object and arrangements of the Congress. On this committee the following gentlemen have consented to act:—Sir James Paget, President of the London Congress; Sir Andrew Clark, President of the Royal College of Physicians; Mr. Jonathan Hutchinson, President of the Royal College of Surgeons; Mr. Bryant, Vice-President of the Royal College of Surgeons; Sir Edward Sieveking, late President of the Royal Medical and Chirurgical Society; Dr. Dickinson, President of the Pathological Society; Dr. Theodore Williams, late President of the Medical Society; Dr. Wade, President-Elect of the British Medical Association; Sir Joseph Lister, Dr. F. Semon, Sir William MacCormac, and Mr. Makins, under secretary to the London Congress. The committee met at

the house of Sir James Paget on Friday, March 21st, and agreed to, as far as possible, further the success of the meeting by diffusing information regarding the business to be transacted. Mr. Makins (2, Queen-street, Mayfair, W.) was appointed secretary, and he will furnish on the part of the committee such details as may be arranged, to any members of the profession who may apply for them. It may interest intending visitors to Berlin in August to know that Messrs. Thos. Cook of Ludgate-circus have very kindly undertaken to give every possible information and assistance. The most convenient routes are *viâ* Queenborough and Flushing, by which Berlin is reached under twenty-four hours.

	1st Class, single.	1st Class, return.	2nd Class, single.	2nd Class, return.
At a cost of	£5 2 11	£7 14 6	£3 14 11	£5 12 4
Dover and Calais..	£5 19 6	£9 14 0	£4 8 0	£7 6 0
Ostend	£5 8 0	£8 13 3	£3 19 6	£2 6 9

Viâ Dover and Calais takes 33½ hours.

For those who like a longer sea voyage and shorter rail, Berlin may be reached *viâ* Southampton and Bremen or Hamburg in one of the Great North American liners. From Hamburg to Berlin is five hours' railway journey, and to Hamburg *viâ* Southampton about twenty-four hours. The steamship *Augusta Victoria*, 8000 tons and 12,500 horse power, will probably leave Southampton for Hamburg on Thursday, July 31st. She is a fine new steamer in the Transatlantic service between Hamburg and New York.

THE PROVIDENT SYSTEM AT HOSPITALS.

THE Mansion House seldom errs in its charitable instincts. But we cannot think that they were sound in giving entertainment to a public meeting for the furtherance of provident principles in the Metropolitan Hospital. The provident system is one for meeting the ordinary medical expenses of respectable families of the working classes. The Lord Mayor has enough to do to meet the claims of desolate widows and orphans of the strictly and urgently sick and poor. It is unreasonable to ask him to take into his care those who can quite well care for themselves. In so far as the Metropolitan Hospital does the proper work of a hospital in this great and populous community, it is entitled to support. But as a provident dispensary it is not entitled to claim the patronage of the Mansion House.

METROPOLITAN ASYLUMS BOARD.

ON Saturday this board held its usual meeting, under the presidency of Sir E. H. Galsworthy, when reference was made to the occurrence of four fresh cases of small-pox, the origin of which is being investigated by the Board's committee. It seems that of the four cases three belonged to one family residing in St. Pancras district, the other case coming from the south side of the river, the infection in that case having evidently been contracted in Spain. Attention was also called to the satisfactory report of the Ambulance Service. It was stated by Mr. Scovell that the work had now taken a new departure in providing an ambulance service for the removal of all infectious cases, and thus the public were preserved from the danger of the conveyance of such cases in ordinary vehicles. The managers had also been asked to disinfect other vehicles when used as ambulances, but since it was impossible thoroughly to disinfect these, and moreover, inasmuch as such action might lead to the use of public vehicles for the conveyance of infectious cases, the managers had recommended that this duty should not be undertaken. The fact was reported that twenty-five persons certified to be suffering from small-pox had been removed from their homes during the year, and of these no fewer than twenty were found not to have the disease. During the last year 8908 cases of fever were removed.

THE ROYAL COLLEGE OF PHYSICIANS.

ON Monday next the annual election of a President of the Royal College of Physicians will take place, and there is no reason for believing that the Fellows will depart from the established custom in regard to the tenure of office of their President. On the contrary, the exemplary manner in which Sir Andrew Clark has fulfilled the duties imposed on him, and the zeal with which he has promoted the affairs of the College, should entitle him to retain the support and good will of the Fellows, not only on this, but also on several similar and subsequent occasions. *Apropos* of the College, it is of interest to note that the rector of Mersham, near Ashford, is promoting the dedication to the memory of Linacre, founder and first President, of a stained glass window in the parish church, where Linacre himself was rector. Linacre's best monument is, however, the Royal College, and his connexion with Mersham was of very fleeting duration. Indeed, he held other clerical appointments, notably a canonry of Westminster.

INFECTION AND THE MILK TRADE.

A SALUTARY example has been made in a country town of a milk-seller who, having a child ill of scarlet fever, persisted, notwithstanding a warning to the contrary, in going round with his milk. The defendant, indeed, carried on his trade, although he was living and sleeping in rooms occupied by the patient; and both he and his wife had refused to allow the removal of the child to the isolation hospital. The magistrates fined the defendant £3, or twenty-one days' imprisonment. It may be well to remember that under the Dairies, Cowsheds, and Milkshops Order of 1885 it is declared to be unlawful to allow any person who has recently been in contact with a person suffering from a dangerous infectious disorder to milk cows or to handle vessels used for containing milk for sale, or in any way to take part or assist in the conduct of the trade or business of cowkeeper, dairyman, purveyor of milk, or occupier of a milk store or milkshop, so far as regards the production, distribution, or storage of milk.

MORE REMOTE DANGERS OF FOOTBALL.

WE have frequently drawn attention to the severe and often fatal injuries that are caused by direct violence in the football field, especially among full-grown men, though probably many less appreciable and not immediately apparent strains and shocks lay the foundation of serious disease. In a recent discussion of a paper by Dr. Kenyon, on "The Hygiene of Exercise," at a meeting of the North-Western Association of Medical Officers of Health at Manchester, the President remarked that whilst football was a very valuable form of exercise for players who were thoroughly trained, yet for those who were for the most part lads in workshops and clerks in offices, and who only had the Saturday afternoon, "it was a frightful exercise; independently of the danger of broken bones, it seemed to him that there must be a large increase of heart disease and diseases of the bloodvessels, which must have their origin in football." Of this no doubt most medical men must have observed cases, and also have seen instances in which, after the effect of the immediate injury had apparently passed off, very serious results had subsequently shown themselves. Some sad cases of this character have come under our observation. In one instance a young man, holding a rising position, was thrown heavily, apparently only spraining his right shoulder; but, some weeks afterwards, the pain and weakness continuing, it was found that the deltoid and teres and other scapular muscles were undergoing atrophy, and as there was no early prospect of his being able

to return to his duties, he had to resign his appointment, to the jeopardy of his prospects in life. In another case, a lad of eighteen, was charged against and received a severe concussion on the chest. At the time he fainted, but was able to walk home; shortly afterwards he noticed an increasing difficulty of breathing whenever he went upstairs or attempted to run; it was then found that he was suffering from aortic regurgitation, the mischief being fairly attributable to the shock received in the charge. From that time he become a chronic invalid, and though he still lives, or was living a short while ago, he is only able to take carriage exercise. With such dangers resulting from the game of football, it is surely high time that an attempt should be made to frame rules by which the game may be rendered more scientific and less hazardous.

DO HEADS GROW WITH ADVANCING AGE?

SOME amusing letters have appeared in a daily contemporary in regard to an alleged steady increase in the size of Mr. Gladstone's head, which, it is said, is rendered manifest by a progressive enlargement in the size of the hat required to cover it. The correspondence exhibits an extraordinary ignorance of well-ascertained facts; for, if there is one thing which would be acknowledged by all anatomists and physiologists, it is that the nervous system, like other parts of the body, undergoes atrophy with advancing age—an atrophy that pervades every tissue, and is as apparent in the thinning of the vocal cords that alters the voice to "childish treble," as in the shrunk shanks for which the "youthful hose, well saved, are a world too wide." No reason can be assigned why the brain should escape the general change that affects the digestive and the circulatory systems alike. Its attributes and faculties attain their highest excellence at or before mid-age, and from that time forth exhibit only a steady decline. To compare Mr. Gladstone with Napoleon, respecting whom a similar story is related, is absurd. The head of Napoleon may have grown between twenty and forty-five, because his brain was greatly exercised during the last ten years of the past century and the first ten of the present; but no calls have been made on Mr. Gladstone of late years at all comparable to the strain on the mental and bodily powers of the French Emperor during that eventful period. The ossification of the sutures of the cranium practically prevents increase of the volume of the brain in advanced life; and, even granting some slight increase, such increase would be compensated for by the attenuation of the cranial bones which is well known to occur in old age. A change in form there may be, but none in size.

THE "VON LANGENBECK HOUSE."

THE movement set on foot by the leading medical societies of Berlin to perpetuate the memory of von Langenbeck by the founding of an institution to be called after his name was warmly taken up by the late Empress Augusta, as we are reminded in a *brochure* from the pen of Professor von Bergmann, entitled "Die letzte Stiftung der Kaiserin Augusta" (Berlin: Hirschwald). He points out how the whole life of this illustrious lady was devoted to the succour of the sick and suffering, recalling her early care of the sufferers from cholera when she was only the wife of the Governor of the Rhine Provinces, also her devoted services in the Danish war, and again in the memorable year 1870. In this work she was associated with von Langenbeck, who obtained her warm interest in the scheme of founding an Association of German Surgeons, which was set on foot in 1872, at a meeting in his house, by Billroth, von Volkmann, Simon, and himself. Professor von Bergmann says that one of the first achievements of the Surgery Congress was the introduction into German hospitals of antiseptics. Another project urged by von Langenbeck was that of founding an institution similar to the English College of Surgeons, and in this, too, he had the strong support of the enlightened Empress, who, indeed, continued after his death to urge on his successors in the presidential chair (von Volkmann, and then von Bergmann) the practical importance of such an undertaking. Hence the Empress Augusta may be deemed to be the founder of the "v. Langenbeck Haus," in support of which this pamphlet has been written. A suitable site has been secured near the Surgical Clinic, and the plans of the institution have been projected. They are briefly described by Professor von Bergmann, who speaks of the scheme as one likely to form a worthy centre of surgical science and a fitting memorial to von Langenbeck.

BELGIAN MEDICAL LEGISLATION.

THE new law which is passing through the Belgian Houses of Parliament is very much opposed to the views of the profession. No sufficient test is to be required either from students wishing to enter the universities, or even from those who have completed their studies and are about to commence practice, and Government is to have the right upon the advice of the medical commissions to authorise any persons to practise "certain acts of the art of healing," so that a bonesetter or other quack, supposing he could get the ear of the medical commission, might conceivably receive an authorisation to practise. It is somewhat bitterly remarked in the medical press that if the House of Representatives had been mainly composed of medical men, "instead of briefless barristers," it would probably not have ordained that medical students should enter on their studies without a good arts examination, while veterinarians are obliged to pass one, nor would medicine have been the only one of the liberal professions opened to women.

DEATH AFTER THE INHALATION OF BROMIDE OF ETHYL.

A SOMEWHAT important case is now before the Berlin courts, in which a dentist is charged with having caused the death of a patient by means of an anæsthetic. The patient was a lady, and the dentist entrusted his pupil, whose age was under seventeen, with the administration of bromide of ethyl. Of this about an ounce was administered, together with four or five drops of chloroform. The patient is stated to have recovered completely from the effects of the anæsthetic, and to have felt quite well during the remainder of the day. The next day, however, she died, and a commission of medical experts has been directed to report upon the matter.

FOREIGN UNIVERSITY INTELLIGENCE.

Berlin.—Professor Grashey of Munich has accepted the invitation to the chair of Mental Pathology in succession to the late Professor Westphal.

Basle.—Female students are to be admitted to medical study only when they are of Swiss nationality, or when they have been educated in Switzerland.

Gratz.—Dr. Escherich of Munich has been appointed Extraordinary Professor of Children's Diseases.

Halle.—It seems that the announcement of the appointment of Professor Mikulicz was, like several previous announcements in connexion with the chair of Surgery, a mistake. It is now stated that Professor Bramann of Berlin has been appointed.

Heidelberg.—Professor Vierordt of Jena has accepted an invitation to a professorship. Professor Leber of Gottingen has been appointed to succeed Professor Becker.

Helsingfors.—Dr. Heinricius has been appointed Professor

of Midwifery, and Drs. Clopatt and Sucksdorff recognised as *privat-docenten* in Children's Diseases and Hygiene respectively.

AT a meeting of the Queen's College (Birmingham) Medical Society held on Wednesday, 19th inst., the following resolution was carried unanimously:—"That this Society condemns the proposed reconstitution of the London University on the lines laid down by the Special Commission for a University for London, as being unfair to the present graduates and undergraduates of the London University, and as tending to lower the standard of medical education and the value of the London degrees."

AN important addition to the Roman hospitals has recently been made in the "Casa di Salute per Malattie Nervose" at Castel Gandolfo. Professors Buonomo of Naples and Sciamanna of the University of Rome have just been appointed its directors.

MR. H. H. CLUTTON has been appointed Joint Lecturer on Surgery at St. Thomas's Hospital; and Dr. W. B. Hadden has been appointed lecturer on Materia Medica and Therapeutics at the same hospital.

PROFESSOR CARL LOWIG, the senior member of the Breslau professorial staff and a well-known chemist, is stated to be dangerously ill. He is eighty-seven years of age.

AN epidemic of influenza is reported to have broken out at Melbourne, also in Christchurch, New Zealand.

Pharmacology and Therapeutics.

CHLORIDE OF OREXIN AS A PURE STOMACHIC.

Professor Penzoldt of Erlangen, after a series of observations made both on healthy medical students and on patients suffering from various affections accompanied by want of appetite, thinks himself warranted in recommending a complex chemical substance, the correct systematic name of which is "chloride of phenyl-dihydro-chinazolin," but for which he proposes the simpler name "chloride of orexin," from ὄρεξις, appetite. He found, by examining the contents of the stomach by means of the œsophageal tube, that in the healthy subjects bread and meat were always digested from half to three-quarters of an hour sooner when chloride of orexin was taken than under ordinary circumstances. Observations were subsequently made on thirty-six patients who suffered from anorexia. In five there was no effect, in five more it was of a doubtful character, but in all the remaining twenty-six cases a marked effect, and in some a surprising one, was produced. This occurred in some instances after the first few doses, but in others the treatment had to be continued for several days before its effects began to show themselves, but these were mostly cases of long standing. The class of cases in which orexin proved most useful were those where the stomach was not diseased, but where the loss of appetite was due to some general condition, such as anæmia, phthisis, or weakness following an operation. Very rarely unpleasant effects were complained of, as a burning sensation in the œsophagus during the deglutition of the orexin, or occasionally vomiting. No effect was observed in the pyrexia of phthisis. The dose ordered was generally from five to seven grains in from three to five pills, and this quantity was given once or twice a day, a cupful of beef-tea or broth being taken with each dose, on account of the pungent properties of this compound. If no effect is produced in four or five days, the treatment should be intermitted for a few days.

THE PHARMACOLOGY OF METHYLAL.

Dr. Tsisvitski publishes as his graduation thesis in the Medico-Chirurgical Academy of St. Petersburg a detailed account of an elaborate series of observations on the physiological effects on frogs, dogs, and other animals of methylal or methylene-di-methyl-ether. The first application of this substance to therapeutic uses was made by Dr. B. W. Richardson in 1887, since which time it has been employed by various observers in all countries as a hypnotic. Dr. Tsisvitski finds that methylal diminishes the irritability of the brain, it does not cause sleep in dogs, only in large doses does it diminish the reflexes, it causes a quickening of the heart's beats by acting on the cardiac accelerator centre, it raises the blood pressure at first, but afterwards diminishes it by stimulating and subsequently exercising an inhibitory action on the vaso-motor centre, it increases the rapidity of the respirations by stimulating the respiratory centre, and that, finally, it has no effect on the temperature of the body.

THE EFFECT OF OPIATES ON THE GASTRIC JUICE.

Dr. Abutkoff has examined the effects of opium and two of its alkaloids on the digestive function in healthy people. He found that the three substances experimented with—viz., opium, morphia, and codeia—all exert a retarding action on gastric digestion by diminishing the general acidity of the gastric juice. Neither the quantity of pepsin nor the absorbent power of the stomach appeared to be affected by any of the three substances. As to their relative effects in such doses as can be given medicinally, opium had decidedly the most marked influence and codeia the least. Dr. Abutkoff suggests that in the case of patients with weak digestion due to deficiency of acid in the gastric juice opiates ought to be given some hours after a meal, but that where the hydrochloric acid is excessive they may be given with meals.

HYOSCINE.

Merck's Bulletin contains a very valuable account of hyoscine, in which the physiological and therapeutic actions are summarised from the reports of numerous observers. Hyoscine is eliminated as such through the kidneys; it causes more or less dilatation of the pupil in most cases, and reduces salivary secretion and perspiration. The effects upon the pulse are still open to some doubt, while upon respiration, upon the spinal cord, and upon the electrical susceptibility of the motorial region of the brain it appears to have given negative results. It is regarded as a very powerful mydriatic; but on account of its liability to act on the organism generally it should be employed with caution. The mydriatic action is energetic and prompt, the dilatation being more rapid and greater with a $\frac{1}{4}$ to 1 per cent. solution of hyoscine than with a 1 per cent. solution of atropine; the duration of the mydriasis is, however, briefer. It is said to be eligible in chronic glaucoma, while acute glaucoma is considered a counter-indication. With regard to the method of administration, there appears to be some difference of opinion, although it seems not to matter whether the hydrochlorate, the hydrobromate, or the hydro-iodate is employed. Hypodermic injection is described by some as very painful, while internal administration acts less promptly, but is less dangerous, and the effect is very enduring. When given internally, $\frac{1}{100}$ grain may be employed, which when given in two tablespoonfuls of menstruum is absolutely insipid. Upon the hypnotic action there is singular unanimity, notwithstanding the difference in the susceptibility of various individuals; one observer, however, considers that the immediate and constant effect of hyoscine injection is not sleep, but a condition greatly resembling sleep, in which the patients are always found somnolent but yet awake. Of its sedative uses in the excitement of insanity there also appears to be no doubt, although it has given but little or no effect in melancholia. Erb has found it a most excellent palliative in the tremors of paralysis agitans, and in this condition it also affords relief from the salivation and diaphoresis which are occasionally so troublesome. The tremors of multiple sclerosis and of chronic alcoholism were also benefited by it. These advantages have to be weighed against certain disadvantages. Many of Erb's patients complained of a feeling of general debility, drowsiness, flushed face, dry throat, slight vertigo, confusion, indistinct vision, and difficult speech. Hallucinations have also been noted. One observer, however, states that all these accessory effects of subcutaneous injection were reduced to utter insignificance by the internal administration of hyoscine.

REPORT OF THE LANCET
Special Sanitary Commission
ON
BAKERIES AND BREAD MAKING.

No. IV.

THE evolution in the baking trade, to which we have already alluded at some length, has progressed in Scotland as well as in England. For instance, it is roughly estimated that there are at present in Glasgow 1600 journeymen bakers and only about 140 master bakers. A third of the men work by machinery, and one firm alone employs constantly 60 men and on Saturdays about 110 men. But for machinery and large firms with considerable capital there would have been now something like 2000 instead of 140 master bakers in Glasgow. Thus, to-day a much larger quantity of bread is produced by a much smaller number of employers and of employed. The journeymen bakers are naturally far from satisfied by this change, and many of them argue that the quality of the bread has deteriorated. They maintain that machinery "knocks the flavour out of bread." From time immemorial the Scotch baker has danced on the bread, and the human leg they declare is the first and the best machine. On hearing of these practices we naturally but somewhat timidly insinuated a question as to whether the men washed their feet, and were promptly informed that certainly they always washed their feet. Our satisfaction, however, was somewhat marred when our informant added that naturally they were compelled to wash their feet *after* they had made the bread, as otherwise they could not put their boots on again! Thus it would appear that one of the reasons which helped to win for Scotch bread its high reputation is the fact that the bakers, bare-footed, danced vigorously on the dough! Under such circumstances, the general public, perhaps, will accept the news that manual labour is, to a great extent, superseded by machinery with more equanimity than that displayed by the journeymen bakers themselves. Nevertheless, even the machine-made bread is not always manufactured with the amount of care which one would expect to find in model institutions. We visited one of the greatest machine bread factories of Glasgow. It was of vast extent, and in some respects admirably arranged. The basement floor was made of iron and concrete; it was 15 ft. high and fireproof. Nevertheless, there were no special means of ventilation, and yet the closets were practically on the same basement and not separated from the place where the dough is mixed and the bread baked. The closets consisted of three seats, with no separation, and a small urinal, so small that the wall was soiled. From sixteen to twenty-two men worked in this basement, which was only separated from closets by a partition and a door that always remains open. The heat of the ovens would draw the emanations from the closets into the bakery. Two more large bakeries were immediately above on the ground floor and the first floor. These had better light and more air, and no closets. The men were obliged to go downstairs to the closets already described, or to a closet in the carpenter's shop, which has the old-fashioned and objectionable pan container. We found another closet with a pan container in the warehouse, situated in the very middle of the block of building and as far away as it possibly could be from the outer air and outer ventilation. It is impossible to understand how any authority could have sanctioned the building of a closet in such a position. Plans for the construction of buildings are all submitted in Glasgow to what is known as the Dean of Guild. The owners of this bakery in question would have been quite willing to construct their closets in any other position or in any other manner if the necessity of doing so had been pointed out to them; but their business was to make bread, and they could not be expected to know all the intricacies of sanitary engineering. It is the local authority who should have the knowledge of the most recent improvements and the truest principles, and see that these are applied to all new buildings, before their occupation is sanctioned. A part of this bakery was not of such recent construction, and we were therefore not surprised to find that gas had to be burnt here all day, and that there was much less chance of securing any efficient ventilation. The machinery employed for the making of the bread was not so good as that of the *Vooruit* of Ghent; some of the most recent innovations had not been introduced, and the bread, though professedly machine made, was more frequently manipulated than by the co-operative bakers of Ghent. Nor could we quite understand why the bread was so dear. At Ghent the fuel used costs 12*s.* a ton, at Glasgow only 5*s.* 6*d.* At Glasgow they make 137 lb. of bread with 100 lb. of flour; at Ghent they never make less than 135 lb., and generally a little more, with the same quantity of flour. Wages are lower in Belgium, but the Ghent co-operators pay their men 25 per cent. more than the current rate of wages in the trade. They use Hungarian and the dearest and best flours, which they only mix with salt and water, and yet they produce bread at 23 and 24 centimes the kilo. Two kilos, or four French pounds, would be rather more than a quartern loaf, yet it would be retailed at from 4½*d.* to 5*d.*, whilst the Glasgow machine-made bread is sold at 6*d.* the quartern. These figures are very important, for they show that any authority in charge of hospitals, workhouses, asylums, &c., desiring to follow the example of the Poor Relief Administration of Paris or Brussels, and bake its own bread, would have a margin to play upon. It will also be seen that it does not suffice for a bakery to be built at a great expenditure of capital, and for bread to be made by machinery, to enable us to feel quite certain that all the necessary sanitary precautions have been duly observed. There may be defects even in what are generally called model bakeries. The whole question has been treated in a very lax manner, and it is time the pioneers of sanitary progress should introduce and popularise a much higher standard of excellence, and then perhaps the word "model" will not so often be taken in vain.

Though there are several very large bread factories in Glasgow, there remain many small cellar bakeries which present all the objectionable features we denounced when making inquiries on this subject in London. In Argyle-street, one of the principal thoroughfares of Glasgow, we visited a bakery which was entirely below the level of the street. It was dark, there were many corners and recesses that never could be properly ventilated, and there were cobwebs obscuring even the windows that at best only let down a feeble light from above. Here we found two tenants living below the level of the street, and on the same level and close by the bakery; thus we had both cellar bakery and cellar tenements. The closet fortunately was a very long way off; but, on the other hand, it was in an exceptionally filthy condition; it seemed to be used by several of the neighbours, and it was not pleasant to think that the men who made bread were compelled to frequent such a place. This bakery used to be overrun by rats, but some time ago the drains were taken up and iron pipes laid down instead, and the rats have disappeared, thus showing once again that their presence is good evidence of defective drainage.

A little further on we came to a bakery which drained into a cesspool, and here precisely similar complaints were made as to the presence of rats. Another bakery, below the level of the street, was surrounded by a narrow area, and in this area there were two or three inches deep of dirty stagnant water. In building the house no means of draining the area had been provided, so that the rain remained there till it evaporated or sank through the brick walls and basement. On a window-sill, looking over this water, there was some moist paste placed there for the purpose, we were informed, of keeping it cool! The asphalte flooring of the bakery had in many places been worn away, and the dirt sank through into the earth underneath. A drain pipe passed through the centre of the bakery, and, joining another pipe, formed a Y. Along the whole of this course a strong smell could be noticed, which led us to infer that the drain leaked. Thus we have moist paste placed to cool over dirty stagnant water outside the bakery window, while inside, amid the flour and the bread, we find in all probability a constant discharge of sewer air. Another very fashionable bakery was approached through a mews. The shop looking on to the front street seemed elegant and clean. Pastry was displayed in the windows in a most inviting way, and many customers thronged to enjoy these delicacies, but they had no knowledge of the mews at the back. Here the pavement was broken to pieces, and pools of black water abounded on all sides. Just upon the bakery wall

stood a huge and vapoury dung-heap. Barrels that had contained lard used by the baker for his pastry, and which would, we were assured, be employed again, rolled about in the mews. Some were half filled with filthy water. The van which is used to take the bread to different customers was pushed into a sort of recess which was practically a public urinal, and on all sides were traces of soil and disgusting dirt. It may be said that a mews is not a bakehouse, but then a bakehouse should not be in a mews; and, in any case, the barrels, the carts, &c., that contain the bread, or the material with which the bread and the pastry are made, should not be allowed to lie about in all the filth of a mews. In two other underground bakeries which we visited we found that the gullies for draining the floor were out of order, and that there were consequently stagnant pools of water within the bakehouse. In one case the gully was on a higher level and at some distance from the sink. The water splashed from the sink could not therefore drain away. From some of these gullies sewer air escaped freely. There were ineffective bell-traps, and one or two dip traps that had been neglected and were so clogged up that they could no longer act. Finally, we found in another bakehouse a closet; it was in good condition, but was not separated from the bakehouse. These bakehouses, which presented so many sanitary imperfections, were, some of them, situated in the best streets of Glasgow, and patronised by wealthy customers. In Glasgow, as in London, it is not the poverty of the quarter, but rather the density of population and the high rents, that tend to render bakeries insalubrious. Judging from the bakeries we visited, we cannot but conclude that the supervision is not exercised with sufficient rigour; nevertheless, no amount of sanitary inspection can render underground bakeries satisfactory.

From Glasgow we proceeded to Manchester, where many complaints are made as to the state of the baking trade. Even the bakeries situated above the ground are often in an unwholesome condition because of the long hours worked, during which time the windows are kept closed, and the place cannot be aired. Men are often at work sixteen or eighteen hours consecutively, and this in spite of all the trades union rules and efforts to abolish overtime. Many bakers have not a plant adapted to an increased output, and, rather than incur the expense of a different plant, they increase the number of hours worked. At Manchester, as at Glasgow, there are some very large and "model" bakeries, where the bread is made by machinery, but others are small underground cellars of the worst description. In the first of these which we inspected we actually found women engaged washing the household linen. It was a small cottage, and the boiler was down in the cellar, which had been converted into a bakery. In the interval of bread-making the family came down and washed their linen amid the troughs and the flour. The pavement was bad and irregular, so that it absorbed the soapsuds, which soon mixed with flour, the whole becoming sour and obnoxious. Not content with washing, a sort of mangle had also been brought down into the bakery. This co-mingling of dirty linen and bread-making seemed to us most obnoxious. The next cellar bakery we entered was so low that it was difficult to avoid striking the rafters without stooping. It was also very dark. By the door there was a gully trap, which had been so long neglected that the water had all evaporated, and there was nothing to prevent the sewer air passing through. The third cellar bakery had also a boiler and all necessaries for washing linen, but we did not find the baker's family actually engaged in this domestic occupation. This bakery could only be entered by lifting a trap in the shop and going down a small ladder. By this means the dark low cellar was entered. Most of the bakeries we visited were in small houses that had been built some eighty years ago. The closets fortunately were generally in the back yard, but in many cases could not be easily reached from the bakery. In some instances we were assured the journeymen bakers are actually locked up in the bakehouse. This is done by rolling a sack of flour over the trap-door. The result is that the journeymen bakers have no convenience whatsoever, and therefore make use of the gully trap that is in the floor of the bakehouse to drain away the water when the floor is washed. This little gully therefore becomes the urinal, and is sometimes befouled not merely with urine but also with soil. Considering that the law stipulates that closets should be removed from bakehouses, the practice of converting an open and small gully trap, placed in the very middle of the bakery, to all the uses of a closet is a flagrant defiance of the law. Yet the men can scarcely be blamed if they are locked up in the bakery. This defilement also occurs in some places where it is possible to get out; and simply because the closet is a little way off, and the men do not like to expose themselves to the cold, which is always difficult to bear after working by the side of a hot oven. All such dangerous practices are incidental to the wretched surroundings of these small cellar bakeries, and it is high time they were done away with. We had hoped that, if it were not judged expedient to at once abolish such places, in any case no new cellar underground bakery would be sanctioned, and thus in time the evil might die out. This very natural conception is, however, so far as Manchester is concerned, erroneous; for some time ago a new cellar bakery was opened, and the authorities did not refuse their sanction. It will be urged that this particular bakery is exceptionally well built &c., but, nevertheless, the principle in itself is bad, and the local authorities should insist on a much higher standard of sanitary excellence than can possibly be obtained in a cellar.

How different, for instance, is the state of one model bakery, near Manchester. It is built entirely above ground in the centre of a large field, and away from all other habitations. Well separated from the baking-house, and yet easily accessible, are the closets and lavatory. These are kept scrupulously clean and well flushed. The baking-house is a lofty hall, with concrete floor and huge windows that give the best possible light. There is no special or mechanical means of ventilation, but the place is so large and airy that the bakers, if anything, complain of cold. The work is mostly done by machinery, and of course there is a steam-engine to supply the motive power. The stabling is completely removed from the bakery, and the store rooms are beautifully clean and light. Here, at least, bread is made away from foul air or dirt. This bakery demonstrates that bread can be made under proper sanitary conditions; and this might always be the case if the public would insist upon having bread that offered such guarantees of cleanliness, and if the sanitary authorities showed more energy in attacking the worst class of bakeries. Perhaps the public are most to blame in this matter, as they do not complain with sufficient persistence. The sanitary authorities seem thoroughly willing to effect every possible reform in such respects. They gave us every assistance in the course of our inquiries, and at Manchester placed two sanitary inspectors at our disposal, by the aid of whom we had no difficulty in gaining admittance to the bakeries.

ARMY ESTIMATES.

IN the Army Estimates for the year 1890–91 the sum of £294,800 appears under the vote to defray the expense of the pay &c. of the medical establishment and cost of medicines &c., being a decrease of £3700 as compared with the preceding year. Of this decrease £2600 are shown under the head of pay &c. of the Medical Staff, and £800 of pay of militia surgeons and civil practitioners. The *personnel* of the department, exclusive of 335 on the Indian establishment, will consist of one director-general, 7 surgeons-general, 15 deputy surgeons-general, 480 brigade surgeons, surgeons-major and surgeons, 82 acting medical officers, and 10 surgeons on probation at the Army Medical School at Netley. Provision is also made for 35 quartermasters of the Army Medical Staff Corps. The total amount for pay &c. of these officers is stated at £234,650. Of the 585 medical officers, 453 are employed at home and 132 in the colonies, and there are also 335 on service in India. But of the 453 employed at home 82 are "acting medical officers"—that is, officers on the retired list who receive £150 a year in addition to their retired pay, and who are not eligible for foreign service. There remain, therefore, excluding the director-general and surgeons on probation, 838 available for general service, of whom 467 are employed in India and the colonies, and only 371 at home. In addition to the amount required for the Army Medical Staff, a sum of £5000 is taken for the pay of surgeons of militia, including allowance for medicine, and one of £6000 for civilian medical practitioners and

medical officers of military prisons; the former being £1300 more and the latter £500 less than in the preceding year. Provision is made for only six surgeons on half-pay eligible for re-employment. The number of medical officers on the retired list is estimated at 485, being 8 less than in the preceding year; of these, 136 are of administrative rank. The amount required for the retired pay of these officers is £196,436. The vote for the army medical school at Netley amounts to £7609, but we observe that the allowance to the examiners of candidates for the medical service and the allowance to army surgeons in aid of expenses incurred in obtaining certificates in operative surgery, amounting together to £900, are included in this, though they are in no sense expenses of the school. The actual cost incurred for this most valuable branch is therefore only £6709. In addition to the sums already noted, £7865 are required for medical services in various establishments at Chelsea, Kilmainham, Woolwich, and Sandhurst. Although Mr. Stanhope lately stated his intention to revive the Army Sanitary Commission, especially with a view to the proposed works in connexion with barrack improvement, we do not find that any sum has been inserted in the estimates to meet this expense. Under the head of works, buildings, and repairs, the following appear to be the most important as connected with health:—The provision of a hospital at Edinburgh Castle; recreation room and gymnasium at Caterham; a recreation establishment at Newbridge; the renewal of roofs and floors of Brompton Barracks, Chatham; improvement of drainage at Warley, Windsor, Dover Citadel, and Beverley; of the water-supply at Weedon, Shoeburyness, and Devonport; of the drainage at Newcastle (Jamaica), and the erection of a bakery at the same station. We presume that the building of new and improvement of existing barracks and huts will be dealt with in the general measure which Mr. Stanhope has intimated his intention of bringing before Parliament.

MR. GLADSTONE ON THE MEDICAL PROFESSION.

ON Wednesday, the 26th inst., Mr. Gladstone, as Senior Governor of Guy's Hospital, opened a new Medical College, in connexion with that institution. Mr. Gladstone, who was accompanied by Mrs. Gladstone, was met at the entrance to the College by Mr. H. Hucks Gibbs, the president, and the members of the governing body, and conducted, amid the cheers of a large crowd, to the dining hall, where luncheon was served. In responding to the toast of "Prosperity to Guy's Hospital," the right hon. gentleman said he "could not possibly look back on the history of the medical profession without being impressed with the extraordinary degree in which it presents most special features to us. If we travel back—say, two or three centuries—we find the medical profession almost without a recognised existence. In the competition with the other great professions, only a short time back, it was nowhere. The great name of Harvey was known, but as regards its social position and influence the time of Dr. Freind and Dr. Mead in the last century was almost the first period to which one could point at which the medical man of this country had assumed a position of influence and power and general recognition. That profession has been steadily rising in power and influence and general respect from that date to this, and it is my belief that it will continue to rise. The growth of civilisation, as we call it, in a large and comprehensive, but also in a very loose and indefinite phrase, carries with it the production of many new forms of human infirmities and disease, and men's wants in the medical sphere are the opportunities of the medical man. His position is, in many respects, singularly fortunate and favourable. In the first place, I am inclined to doubt for myself whether, as regards the mere question of remuneration, the medical profession does not offer on its threshold as good opportunities of, in some cases, even liberal return with as little risk as either of the other great professions." Having referred in appropriate terms to Sir William Gull, the right hon. gentleman said: "I am delighted when I hear of the creation of great fortunes in this country that are not merely commercial. It is an excellent thing that large fortunes are made in commerce, by the handling of money, by the supply of the country with material goods; but it is desirable that their power and influence should be qualified by the creation of other fortunes, such as now, almost for the first time, we find beginning to be created by medical men. I rejoice to think that the medical man, who spends his talent and strength as freely in the performance of his duty as any member of any other profession, will be able to make a competent and even large provision for his family. Another point upon which I congratulate the profession is its independence. It does not rely on endowment, but on its own exertions directed to meeting human wants. There is no great profession which has so little to say to the public purse, and which so moderately and modestly dips its hand into that purse. It is not only in the interest of the public, but of the profession itself, that it is eminently self-supporting; and, rely upon it, that that principle of self-support does much to maintain its honour and independence, and to enable it to pursue its stately march in the times that have come and in the times that are coming, to form its own convictions, to act on its own principles without fear or favour, for the general benefit of mankind."

THE BRITISH NURSES' ASSOCIATION.

AT a meeting of the British Nurses' Association, held at 20, Hanover-square, on Friday, the 21st inst., Mrs. Bedford Fenwick read a paper on the Registration of Trained Nurses, in the course of which she summarised the arguments previously put forth in favour of such a scheme. Nursing had become a popular profession, and registration seemed the only way of protecting the public. It was thought that if the public knew something of the way it had been victimised some measure of this kind would have been demanded long ago. In seeking for registration, therefore, the interests of the public and the nurses were at one, and it should be remembered that an outcry against registration similar to that now raised had been made against the registration of medical practitioners. The British Nurses' Association has opened its register and had received already many hundreds of applicants for enrolment. When it was completed they intended to submit it to the Privy Council for the purpose of receiving a legal status and authority for their work. The lecturer thought the matter lay in the hands of the nurses themselves, who, in delaying their application for registration, were simply postponing a great benefit to themselves and their profession.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF INSPECTORS OF THE MEDICAL DEPARTMENT OF THE LOCAL GOVERNMENT BOARD.

Diphtheria at Tredegar, by Mr. J. SPEAR.—The story of this diphtheria prevalence, although extending from 1884, shows that for some twenty years up to 1886 the disease had not assumed an epidemic form. But after certain isolated occurrences, thirteen diphtheria deaths took place towards the close of 1886, the disease continuing into 1887. Again, from May to the end of December, 1887, the infection spread somewhat widely, about one hundred cases and thirty deaths taking place. Of these latter, twenty-five were within an area that had all along been infected, and though school influence operated in its spread, yet the medical officer of health, who had very carefully inquired into the causes of the disease, was convinced that faulty sanitary conditions enabled it to acquire a firm footing in certain localities even if they did nothing more. Prominence is given throughout the report to this view, which has before been distinctly held by Mr. Spear, and when a serious recurrence of diphtheria took place in March, 1889, and its circumstances were somewhat minutely investigated, the same explanation seemed to be forthcoming. Between March and December 224 cases in 162 houses were reported. The distribution of the disease seemed to necessitate the elimination of milk and of water as

vehicles of infection; schools, it is admitted, played a prominent part in the dissemination of the poison; but a number of instances are given which go to show that the main incidence of the disease fell on localities which exhibited obvious sanitary defects, and especially defects as to sewerage and drainage. Mr. Spear, indeed, contrasts one locality where the local conditions were especially bad, and there was much diphtheria, with a neighbouring one of sixty houses, where only one case occurred and the sanitary circumstances were fairly satisfactory. The fastening of the disease upon localities where the soil and air were found to be polluted by sewage was, it is added, fully in accordance with the experience which at earlier stages of this prevalence had been reported by the local medical officer of health. This view, though by no means always borne out in epidemics of diphtheria, certainly deserves the fullest consideration; and it has at least the advantage of indicating certain obvious remedial measures. To these Mr. Spear addresses himself by strongly advocating a proper system of drainage and sewerage, a general improvement of the conditions in and about dwellings, and also the provision of some means for properly isolating first cases of infectious diseases.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN twenty-eight of the largest English towns 5710 births and 4051 deaths were registered during the week ending March 22nd. The annual rate of mortality in these towns, which had been 26·6 and 23·6 per 1000 in the preceding two weeks, further declined last week to 21·7; the rate was 19·3 in London and 23·8 in the twenty-seven provincial towns. During the first twelve weeks of the current quarter the death-rate in the twenty-eight towns averaged 24·9 per 1000, and exceeded by 1·8 the mean rate in the corresponding periods of the ten years 1880–89. The lowest rates in these towns last week were 14·5 in Leicester, 16·4 in Norwich, 17·1 in Derby, and 17·7 in Brighton. The rates in the other towns ranged upwards to 28·0 in Sheffield, 28·3 in Blackburn, 28·8 in Wolverhampton, and 30·5 in Manchester. The deaths referred to the principal zymotic diseases, which had declined from 379 to 366 in the preceding three weeks, further fell last week to 363; they included 141 from whooping-cough, 79 from measles, 44 from scarlet fever, 43 from diphtheria, 34 from diarrhœa, 22 from "fever" (principally enteric), and not one from small-pox. No deaths from any of these diseases were recorded in Leicester, Birkenhead, Huddersfield, and Halifax; while they caused the highest rates in Bristol, Bolton, Salford, and Brighton. The greatest mortality from measles occurred in Liverpool and Derby; from whooping-cough in Salford, Bristol, Bolton, and Brighton; and from scarlet fever in Wolverhampton. No marked excess of "fever" mortality was recorded in any of these great towns. The 43 deaths from diphtheria in the twenty-eight towns included 23 in London, 3 in Liverpool, 3 in Birmingham, 3 in Manchester, and 3 in Salford. No death from small-pox was registered in any of the twenty-eight towns. Seven cases of this disease were under treatment in the Metropolitan Asylum Hospitals, and not one in the Highgate Small-pox Hospital. The number of scarlet fever patients in the Metropolitan Asylum Hospitals further declined last week to 1124; 87 cases were admitted to these hospitals during the week, against 53 and 76 in the preceding two weeks. The deaths referred to diseases of the respiratory organs, which had been 510 and 447 in the previous two weeks, further declined to 381 last week, and were 121 below the corrected average. The causes of 76, or 1·9 per cent., of the deaths in the twenty-eight towns last week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Norwich, Nottingham, Leeds, Sunderland, and in five smaller towns; while the largest proportions of uncertified deaths were recorded in Liverpool, Cardiff, Birmingham, and Sheffield.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had declined from 28·7 to 25·2 per 1000 in the preceding five weeks, further fell to 24·8 in the week ending March 22nd; but exceeded by 3·1 that which prevailed during the same week in the twenty-eight English towns. The rates in the eight Scotch towns ranged from 18·9 in Aberdeen and 21·0 in Dundee, to 27·2 in Leith and 27·3 in Glasgow. The 641 deaths in the eight towns showed a decline of 11 from the number in the previous week, and included 37 which were referred to whooping-cough, 34 to measles, 12 to diphtheria, 11 to diarrhœa, 4 to "fever" (typhus, enteric, or ill-defined), 3 to scarlet fever, and not one to small-pox. In all, 101 deaths resulted from these principal zymotic diseases, against 104 and 103 in the preceding two weeks. These deaths were equal to an annual rate of 3·9 per 1000, which exceeded by 1·9 the mean rate last week from the same diseases in the twenty-eight English towns. The highest death-rates from these diseases last week were 5·8 in Edinburgh and 7·9 in Leith. The fatal cases of whooping-cough, which had declined from 53 to 39 in the preceding three weeks, further fell to 37 last week, and included 15 in Glasgow, 11 in Edinburgh, 4 in Dundee, and 3 in Greenock. The 34 deaths from measles exceeded by 6 the number in the previous week, and included 12 in Glasgow, 12 in Edinburgh, and 8 in Leith. The fatal cases of diphtheria, which had been 11 and 10 in the preceding two weeks, rose again to 12 last week; 5 occurred in Glasgow and 4 in Edinburgh. The 4 deaths referred to "fever" showed a decline of 4 from those recorded in the previous week, and included 2 in Edinburgh. The 3 fatal cases of scarlet fever also showed a decline from recent weekly numbers, and included 2 in Glasgow. The deaths referred to diseases of the respiratory organs in the eight towns, which had declined from 203 to 154 in the preceding four weeks, further fell to 129 last week, and were slightly below the number returned in the corresponding period of last year. The causes of 61, or nearly 10 per cent., of the deaths in the eight towns were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 28·2 and 29·0 per 1000 in the preceding two weeks, further rose to 30·9 in the week ending March 22nd. During the first twelve weeks of the current quarter the death-rate in the city averaged 37·1 per 1000, the mean rate during the same period being 24·0 in London and 25·9 in Edinburgh. The 209 deaths in Dublin last week exceeded by 13 the number in the preceding week; they included 6 which were referred to measles, 4 to whooping-cough, 2 to "fever" (typhus, enteric, or ill-defined), 1 to diphtheria, 1 to diarrhœa, and not one either to small-pox or scarlet fever. Thus the deaths from these principal zymotic diseases, which had been 17 and 18 in the preceding two weeks, declined last week to 14; they were equal to an annual rate of 2·1 per 1000, the rate from the same diseases being 2·1 in London and 5·8 in Edinburgh. The fatal cases of measles, which had been 5 and 3 in the preceding two weeks, rose again to 6 last week, and exceeded the number recorded in any week since the middle of January last. The four deaths referred to whooping-cough showed a further decline from recent weekly numbers; and the fatal cases of "fever" and of diarrhœa also showed a decline from those recorded in the previous week. Nine inquest cases, and 8 deaths from violence, were registered; and 74, or more than a third, of the deaths occurred in public institutions. The causes of 34, or more than 16 per cent., of the deaths in the city were not certified.

THE SWEDISH MOVEMENT TREATMENT.—A lecture and demonstration of this treatment, as recommended by Henrick Ling, were given on Tuesday, March 25th, by Mr. Harold Billberg, graduate of the Royal Central Institute, Stockholm, at the Billberg Institute, 10, Stratford-place, W., under the immediate patronage of the Danish Minister and many well-known medical men. It was claimed that the treatment proposed by Ling was based upon strictly scientific principles, requiring for its proper use an extensive acquaintance with human anatomy and physiology; and in Sweden only duly qualified men were permitted to practise it. In that country its professors co-operated most heartily with the members of the medical profession, and the lecturer expressed his readiness to act in conjunction with English medical men, for such of whose patients the Swedish movement treatment might be deemed advisable.

Correspondence.

"Audi alteram partem."

TOXIC EFFECTS OF CANNABIS INDICA.

To the Editors of THE LANCET.

SIRS,—In connexion with the subject of the therapeutical uses and toxic effects of cannabis indica raised by the letter of "W. W." in THE LANCET of March 15th, and continued by Dr. Russell Reynolds in the following number, my recent experience of some toxic symptoms may be of interest. In the course of the morning I had prescribed for a gentleman of the age of forty-eight a mixture containing twenty minims of the Pharmacopœial tincture of cannabis indica for migraine and lassitude. He was of an excitable temperament, nervous about himself, and particularly anxious not to be laid up just then, on account of some important business engagements. In the early afternoon I received a telegram, asking me to see him at his residence as soon as possible, and then learnt that after leaving my house he had gone to the city, had had the prescription made up, and had taken "a dose." Very shortly afterwards he had felt giddy and faint, and had had great difficulty in reaching the underground railway even with assistance. He had complained of much palpitation and anxiety, and said he was almost unable to stand. After telegraphing to me, he had gone to bed and fallen into a deep sleep. When I saw him he was excited and nervous, although saying he felt better than on going to bed; the pulse was still rapid and compressible, but there were no indications of any other disturbance of the nervous system; upon being reassured about the cause and prognosis, he speedily became quieter, and complained of hunger, got up, dressed, and went down to dinner. I was at first much puzzled at such marked effects from an ordinary dose, but upon asking to see the medicine bottle found the explanation. Having no glass at hand when taking the medicine, he had recklessly drunk from the bottle and had swallowed about two doses and a half, equivalent to about fifty minims. He has since taken the ordinary dose on several occasions, not only without any toxic effects, but with marked relief of migraine and of the ordinary symptoms of business worry.

I am, Sirs, yours faithfully,

NESTOR TIRARD, M.D. LOND.

Weymouth-street, W., March 22nd, 1890.

"ON A SUBJECTIVE SENSATION OF THE MOUTH IN WOMEN."

To the Editors of THE LANCET.

SIRS,—Dr. W. B. Hadden published, in THE LANCET of Jan. 25th, notes of three cases under the above title. I have waited for some time in the hope of seeing notes of similar cases in the experience of others; but either these cases are very rare, or medical men will not take the trouble to contribute their experiences. On Dec. 9th, 1889, I made the following notes of a case of the kind, though until I saw Dr. Hadden's article I had not thought it possible that the case was out of the common except to my own limited experience.

Mrs. T——, aged fifty-two, has complained for years of "bearing down pains," "opening and shutting of the back," pains in the groins, &c., and has worn various pessaries at intervals for a prolapse which has never been serious. She still menstruates, but recently the periods have come on irregularly and at longer intervals. For five weeks she has had pain on the tip of the tongue, "at first like a cold in the teeth and gums." The pain is described as a "tingling and burning." She insisted that there was a prominent spot there, but careful examination with a lens and a needle failed to show any one part more tender than another, the whole area of tenderness being about the size of a threepenny piece. The teeth were somewhat crusted with tartar, and dyspepsia has been a frequent complaint; so I directed my attention to that with some apparent success, though at the end of February she said the tongue was still tender. She has the florid colour on the malar prominences mentioned by Dr. Hadden.

Surely some of our gynæcologists must have met with cases of the kind, and be able to suggest some treatment. I feel sure that my patient would have visited half the doctors in London had her means permitted, so miserable was she for some weeks with this pain.

I am, Sirs, yours faithfully,

A. OGIER WARD, M.D.

Lower Tottenham, March 19th, 1890.

THE TREATMENT OF APOPLEXY.

To the Editors of THE LANCET.

SIRS,—Dr. Charlton Bastian in his instructive post-graduate lecture on Hemiplegia (THE LANCET, March 8th) has given a strong caution against active treatment in apoplexy, basing it on the acknowledged difficulty of diagnosis between hæmorrhage into the brain and thrombosis or embolism. Dr. Bastian states further on that in certain cases it is clear that we are dealing with embolism; and I venture to suggest that there are not a few cases in which it is equally clear that we are dealing with hæmorrhage, and in which only active treatment can save life. For example, a stout florid middle-aged or elderly person, after over-excitement or exertion, and perhaps a period of constipation, falls suddenly "in a fit," unconscious. Such a case occurred to me some years ago in the person of a lady aged nearly seventy. Acting on the clear indications of hæmorrhage, I bled to thirty-five ounces. She regained consciousness in eight hours, had slight right hemiplegia for two or three months, and is now quite well. There was in this case a quite unusual degree of blood tension (arterial and venous), and hence the removal of so much as thirty-five ounces. Much smaller venesections appear to exert an indirect tranquillising effect on the heart and circulation. It will not be denied that such an effect is most desirable in the presence of cerebral hæmorrhage, and I fail to see in what way it can be injurious in thrombosis or embolism. Where instant depletion is not requisite, the same result may be attained more gradually. A gentleman, aged seventy-six, has had two faint hemiplegias. On the second occasion a dose of calomel and jalap at the commencement of the symptoms certainly *appeared* to prevent their development. Is it not the case that cerebral attacks, slight or severe, with a hard pulse and constipation, always demand "active treatment" of one kind or another?

I am, Sirs, yours obediently,

Strathpeffer Spa, N.B., March 18th, 1890. FORTESCUE FOX.

MEDICAL PHARMACY.

To the Editors of THE LANCET.

SIRS,—The custom of dispensing medicines is so universal in general medical practice that most doctors have no choice in the matter. The College of Physicians, however, while leaving its Licentiates at liberty, forbids its Members to dispense medicines. This rule creates an artificial distinction and prevents men engaged in general practice from becoming Members. The Membership of the College of Physicians confers many advantages, and therefore it is unfair to debar from it all general practitioners. A Fellow of the College of Surgeons is at liberty to dispense drugs. Why is that lawful for a surgeon which is unlawful for a physician? Such anomalies are discreditable and productive of much harm.

There is no doubt considerable room for discussion as to the desirability of medical men dispensing medicines, but it should either be forbidden altogether or left to the judgment of the individual. The dispensing of medicines produces a practical knowledge of drugs, which prevents errors such as those which often enough prove a source of merriment to dispensing chemists making up the prescriptions of eminent physicians; but, on the other hand, the desire to save time, and similar considerations, are apt to lead the dispensing doctor to use ready-made mixtures and pills without sufficient regard to their precise ingredients. Dispensing is convenient in case of night visits, and it enables a doctor to be sure what medicine his patient is taking; but the dispensing of medicines is burdensome, if done by the doctor himself, and the responsibility of leaving it to an imperfectly trained dispenser is a very serious one. Dispensing prevents the great evil of patients indefinitely repeating prescriptions without advice, or ignorantly transferring them to others; but the consideration of the cost of

drugs, the actual stock in hand, or the time required for dispensing, is less obtrusive in simple prescribing. Considerable saving of money results to the patient from medical dispensing, but the scantiness of his remuneration may induce the medical man to use the cheaper drugs too exclusively. A horror of dispensing medicines simply because it appears to partake of the nature of that degraded thing called "trade" seems best suited to the exalted notions of incipient general paralysis.

At all events, I think that the College of Physicians ought to repeal a by-law which excludes all doctors engaged in general practice from the Membership of that College.

I am, Sirs, yours faithfully,

Highgate, North, March, 1890. HUGH WOODS, M.D.

"PROLAPSE OF THE WALL OF THE STOMACH OF A HORSE INTO THE DUODENUM."

To the Editors of THE LANCET.

SIRS,—Professor Walley has criticised in his letter to you a passing remark in my communication to the Pathological Society. He says that I have been misinformed, or have come to a wrong conclusion in my statement that the horse hardly ever vomits except when the stomach is ruptured. I need not say that my communication was from the point of view of comparative pathology, and since vomiting is so common in the pyloric obstruction of man, I wished to imply that the absence in this unique specimen might be due to the peculiarity of the animal. In my paper I referred for my authority to Williams,[1] and the considerable experience of the veterinary surgeon to the Brown Institution agrees therewith. I must therefore leave Professor Walley to settle the question as to the fact with his Edinburgh colleague. Further, from the *a priori* view, he fails to see how a horse with ruptured stomach can vomit. I cannot see the force of this objection. He appears to lay stress on the active contractions of the stomach in vomiting. But this opinion has been discarded since Majendie and Schiff showed that the stomach of the dog, including the cardiac orifice, might be replaced by an inert bladder and yet vomiting be produced. The relaxation of the cardiac orifice and the contractions of the abdominal muscles, including the diaphragm, are held to be the factors in vomiting. Although rupture of the stomach is rare, vomiting certainly occurs in man. A case is given in Erichsen's Surgery and another by Poland.[2] The same view is held abroad. Von Nussbaum speaks of the "almost never-failing vomiting" in wounds of the stomach.[3] The rareness of vomiting in the horse would appear to be due to the non-relaxation of the lower end of the œsophagus. Meade Smith says:[4] "In most cases it [vomiting in the horse] will be found due to the partial rupture of the walls of the œsophagus"—i.e., as I understand, in addition to that of the stomach. I am, Sirs, yours truly,

Wimpole-street, W., March 22nd, 1890. WALTER G. SPENCER.

NIGHT ATTENDANCE AT HOSPITALS.

To the Editors of THE LANCET.

SIRS,—I notice in THE LANCET of March 15th, in the article on the Hospital Saturday Fund movement, you have stated that I suggested that "*the hospital authorities should arrange so that out-patients might be seen after the nominal working day was over*"—that is, of course, at night." The last six words were not mine, and are misleading. I never proposed that hospitals should be opened all night, which seems to be your conclusion from the above words. My suggestion was that a working man should be able to attend at a hospital in the evening, after his work—say, between the hours of five and eight on one or two days of the week.

I am, Sirs, yours faithfully,

Lennox-gardens, S.W., March 22nd, 1890. COMPTON.

*** Earl Compton puts a construction on our words which they were not intended to bear. We never imagined that his lordship proposed to keep them open all night for out-patients. We still are strongly of opinion that the facilities for getting out-patient treatment at hospitals are in great excess of the necessity, and need curtailment and not extension. Men at work all day are not a class on whom hospital funds should be expended.—ED. L.

[1] Veterinary Medicine, fifth edition, p. 658. Edinburgh, 1888.
[2] Guy's Hospital Reports, 1858, third series, vol. iv., p. 134, Case 3.
[3] Deutsche Chirurgie, Lief 44, 1880, p. 106.
[4] Physiology of Domestic Animals, Philadelphia, 1880, p. 336.

THE EFFECT OF THE BINDER ON LYING-IN WOMEN.

To the Editors of THE LANCET.

SIRS,—Having read the discussion on Dr. Herman's paper (Obstetrical Society), as reported in your last issue, I quite agree with the statement "that the main utility of the ordinary binder was as a means of comfort to the patient," and I fail to see how it can ever restore the abdominal shape which has been lost by over-distension. I have always held that it would be much wiser to support the abdominal walls during pregnancy—say, from the fourth month onward—and have noticed the marked difference in the time occupied by the labour in those who have adopted this plan. Indeed, I venture to say if the abdomen of each primipara were supported during pregnancy, before labour on all occasions, there would be little need for the "binder" afterwards, except with regard to comfort, the abdominal walls being assisted in time and their strength husbanded till labour set in. My rule is, During pregnancy bind from below up; after labour from above down.

I am, Sirs, yours faithfully,

Dublin, March, 1890. ALEX. DUKE, F.C.P.I., Ex-Assistant-Master, Rotunda Hospital.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

The New Mortuary.

A long-delayed and greatly needed work has at last been commenced. A new mortuary is being erected by the Dock Board, the City Council contributing half the cost both of erection and maintenance. The new buildings will consist of ante-room, mortuary proper, and detached post-mortem room. The mortuary will be so arranged that those who may come for the purpose of identifying any body will be able to do so from outside without entering. The plans have been prepared from some originally suggested by a sub-committee of the Medical Institution, and the new building will be very convenient to all those whose duty takes them there.

The Strike among Dock Labourers.

For some weeks past Liverpool has experienced the inconvenience of a strike among the dock labourers, a large body of men, not regularly employed, whose labour is chiefly unskilled. The result has been the importation of many labourers from other places, more or less distant, and already there is much distress among the wives and children of the unemployed. These strikes are not without their significance to medical practitioners, seeing that they mean too often fever, disease, and gratuitous medical attendance. It was computed that the first week's strike involved a loss to the men of £20,000.

Death of Mr. Cavanagh, Surgeon.

Mr. James Walter Cavanagh has been a resident in Liverpool for thirty years, having come as one of the resident surgeons to the Liverpool dispensaries on his return from serving in the Crimean War. He was until very recently Surgeon-Major in the Militia, and at the time of his death held the office of surgeon to the Liverpool Main Bridewell. He was a native of Ireland, was educated in Dublin, and many old fellow-students and friends will learn of his death with sorrow.

The Assizes.

The case of special interest at the Assizes now sitting is what is known as the Atherton tragedy, in which a pawnbroker's assistant named Walter Davies was murdered on July 22nd, 1889. The case was one of purely circumstantial evidence, the deceased being insensible when found, and no one having seen the murder committed. The latter was of a very atrocious character, the deceased having been a quiet inoffensive man in charge of a branch establishment, his employer placing much confidence in him. On the morning

of July 22nd he was found in the cellar of the shop of which he was in charge at about a quarter to nine; he was lying under a tap on the floor insensible and dying, and he died soon after. Mr. Robert Sephton, surgeon, of Atherton, was at once called, and on arrival observed five pools of blood between the cellar steps and the spot where the body was. Upon the body he found eleven wounds, which had been evidently inflicted with some sharp instrument. The most serious one, which had evidently caused death, was a punctured wound below the right ear, an inch in length, and about two inches in depth; this had severed the jugular vein. Below this was another wound, and a third over the right eye, two inches in length, extending down to the bone. On the top of the head was a wound an inch and a half long, several smaller wounds on the forehead, face, left side of the head, and throat, and behind the left ear a punctured wound a quarter of an inch long. There was also a wound across the fingers of the right hand, one finger nail being cut off. Death resulted from hæmorrhage. Suspicion fell at first upon a man named Lord, but subsequently the prisoner William Chadwick was found to have pawned the deceased's watch and chain, as well as other property found missing from the premises. He was also identified by numerous witnesses as having been in Atherton on the morning of the murder, one witness identifying him by a deformity of one of his fingers. He was found guilty after a three days' trial, and sentenced to death.

Liverpool, March 26th.

NORTHERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENT.)

Death of the Rev. J. H. Rutherford, L.R.C.P. & S. Edin., of Newcastle.

A WELL-KNOWN and highly-popular Nonconformist minister, the Rev. J. H. Rutherford, of Newcastle, died in this city on Friday last, under very sad circumstances. Mr. Rutherford had been officiating at the funeral of one of his church members on Wednesday, and had nearly reached home on foot when he was observed to drop his gloves three times and stagger against a side wall. He was, however, prevented from falling by timely assistance from bystanders, who found him so insensible that it was impossible to remove him the short distance to his own residence. He was, therefore, kindly taken in by a neighbour. Dr. Oliver, Dr. Philipson, and his son (a surgeon) were soon in attendance; they found him in a state of apoplectic coma with paralysis, out of which he never rallied, dying on the Friday morning as before mentioned. Mr. Rutherford was in many respects a remarkable and many-sided man. Coming a young minister and a perfect stranger from a little border Scotch town, he soon gathered a large congregation, who, about thirty years ago, built him one of the most commodious chapels in Newcastle. His efforts in the cause of education were also very successful, his schools being in many respects regarded as models. Most of his work was initiated and carried out personally; he had apparently little regard for committees. About twenty years ago, being then middle-aged, he thought he could speak with more authority and also better master some of the sanitary questions if he had a medical education; so he entered as a student in the Newcastle School of Medicine, meantime pursuing his ministerial duties; and in due course became a fully qualified practitioner. He now applied himself to sanitary science, and his voluminous and painstaking report on the public health of Newcastle in 1866 is well known to all sanitarians; his paper on the same subject read at the Social Science Congress in 1870 was also an important communication. It is impossible to even glance at his career as an educationist, sanitarian, or philanthropist, without feeling the greatest respect for his ability, industry, and kindness of heart. Mr. Rutherford, who has left a widow and grown-up family of two daughters and three sons, was in his sixty-fourth year; two of his sons are surgeons, one of whom is practising in Newcastle, and so was able to render what assistance he could at the bedside of his father. His remains were interred in Elswick cemetery on Monday with every mark of respect from all classes and denominations, the funeral being one of the largest ever seen in Newcastle. The *Daily Chronicle* estimates the spectators at 100,000; the Durham College of Science and Medical College were closed.

Ripon.

The beautiful little Yorkshire city of Ripon has received a generous offer from its dean, who has tendered a sum of £400 towards the public swimming baths for the city, which has been definitely taken in hand by the corporation, who have commenced the construction of a handsome bathing pavilion on the banks of the river Ure.

The Munificent Bequest to Langholm.

Private advices received in Langholm place the munificent bequest of the late Mr. Thomas Hope of New York at not less than £80,000. Mr. Hope was a successful merchant in New York, but left his native place, Langholm, when quite a boy. He visited Langholm about two years ago, and expressed a wish to benefit the town, and for the purpose of erecting a hospital at a future time he purchased the necessary land, and also appointed trustees to carry out his intentions after his decease. Mr. Hope died on the 3rd inst. at Noroden Heights, Connecticut. He was never married, but leaves a number of relatives, who, it is understood, will receive part of the large fortune he amassed during the course of his long business career in New York.

Newcastle-on-Tyne, March 27th.

DUBLIN.

(FROM OUR OWN CORRESPONDENT.)

The Dental Hospital of Ireland.

THE Committee of Management of this hospital lately held a Venetian fête, concert, and ball, for the purpose of obtaining funds for the temporary renewal and permanent building fund of the hospital. The public generously responded, and it is gratifying to learn that a sum of £2745 was received. Deducting the necessary expenses connected with the fête, the net gain has been £2573, which amount must be regarded as satisfactory.

Gallant Act of an Army Surgeon.

Surgeon T. Birt, of the Army Medical Staff, last week made a gallant attempt to save the lives of two soldiers who were recently drowned in Queenstown Harbour. Having thrown off his outer garments, he jumped into the water and swam towards the men who were immersed, but they both sank before he could give any assistance.

Sir Patrick Dun's Hospital.

Last year the in-door patients numbered 1364 and the out-door 19,078. The income showed an increase, the trained nurses for private patients adding nearly £1000 to the receipts. A sum of £400 is required for raising the number of full beds from sixty to seventy, and the governors trust that a successful effort will be made permanently to raise the subscription list by that amount.

Monkstown Hospital.

A special appeal was issued last year on behalf of the building fund, which resulted in total receipts amounting to £2081; but a further sum of £1200 will be required to complete the work. The great necessity for the increased accommodation now being provided for was experienced during the latter months of 1889, when the institution was much overcrowded in consequence of the large number of cases of enteric fever which were admitted. It is proposed to add an observation ward, capable of containing five or six beds, to the hospital, together with other improvements.

Death of Mr. W. G. Hill of Fermoy.

This gentleman died at Bayswater last week. Deceased was formerly a surgeon in the Royal Navy, and on leaving the service he settled in Fermoy, county Cork, where he had a very fair practice. Mr. Hill was a Fellow of the Royal College of Surgeons in Ireland.

Jubilee Medal.

It is stated that the following gentlemen have received the Jubilee medal which has been issued by Her Majesty in commemoration of the fiftieth year of her reign—viz., Sir George Porter, Bart., Sir John T. Banks, K.C.B., Dr. William Moore, D.L., and Mr. William Colles.

The annual meeting of the Dublin Sanitary Association will be held on Thursday, the 27th inst.

Dr. D. Flynn has been appointed extraordinary physician to St. Vincent's Hospital for Women and Children, Cork.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Vaccination.

OWING to the almost constant prevalence of small-pox at the Reunion Island, it has been seriously considered whether vaccination should not be made compulsory in that island. The Paris Academy of Medicine was called upon to suggest a project of law on the subject, and Dr. Hervieux, the Director of Vaccination at the Academy, was requested to report on the same. At its last meeting Dr. Hervieux read his report, in which he insisted on the urgency of compulsory vaccination. He then showed how easy it would be to carry it out in the present day with animal vaccine. The age at which vaccination should first be practised varies in the different countries where vaccination is compulsory. In Germany vaccination is practised during the first two years after birth; in England, during the first three months; in Scotland, during the first six months; in Roumania, before the age of ten months; in Switzerland, before two years, and, in one canton, before the age of five years. In France, vaccination is performed as soon after birth as possible, but the newborn infant being very feeble and predisposed to certain maladies, Dr. Hervieux thinks that it is better to wait till the child has reached the age of three months. As to the second or third vaccination which may be necessary in case of an unsuccessful operation, Dr. Hervieux thinks that it should be practised without delay, as the non-success may depend as much on the operation as on the subject operated on.

"Naturam Morborum Ostendunt Curationes."

Without waiting to inquire who was the author of this adage, or *apropos* of what circumstances it was used, Dr. Tison, at a recent meeting of the Société de Médecine Pratique, endeavoured to combat the present tendency of the profession to attribute a syphilitic nature to every affection which is amenable to the iodide of potassium and mercury, the so-called antisyphilitic treatment. He pointed out that in general pathology treatment was never appealed to in support of a diagnosis, and he could not see why it should be otherwise in the case of syphilis. In support of his opinion the author submitted in detail several notes of cases from the Hospital St. Joseph. Dr. Heulz observed that when a patient presents the objective signs of a syphilitic lesion, whether superficial or deep, and is cured by an antisyphilitic treatment, it may be affirmed that the subject was syphilitic, even although he may deny ever having had syphilis, and no trace whatever of former syphilis could be found even after a minute examination. One often met with subjects affected with syphilitic lesions without any appearance of previous manifestations. When the diagnosis is doubtful, the difficulty is overcome by instituting the treatment, and if the symptoms are ameliorated and even cured, one is justified in concluding for syphilis. Referring to one of the cases of cerebral tumour related by Dr. Tison, the symptoms of which led him to conclude that it was not of syphilitic origin, he nevertheless employed the antisyphilitic treatment, consisting of mercurial frictions and the administration of the iodide of potassium. The patient, a young man of twenty-two years of age, was completely cured in thirty-two days. Dr. Balzer observed that he could not see in the above observation any other case than that of a tumour of a syphilitic nature, and added that among cerebral tumours those which are ameliorated by the mercurial and iodide treatment were certainly of syphilitic origin.

Absinthism and Alcoholism.

At one of the popular lectures referred to in my letter in THE LANCET of March 1st, Dr. Laborde selected for his subject last week Absinthism and Alcoholism. He began with the statement that no form of alcohol was harmless in principle. Its principal effects are ebriety and a certain degree of excitement, without any dangerous consequences when produced by wines or alcohols of honest origin, but terrible and even fatal intoxication when due to manufactured liquids. Unfortunately, except in the case of the more favoured persons, genuine wine and alcohol may be considered things of the past. All manufactured liquids, particularly absinthe, contain substances which are essentially toxic, and which are borrowed from plants in appearance the most inoffensive—the "queen of the meadows," for example. The lecturer thought the Germans had carried the palm of proficiency in the art of poisoning the world. They have discovered products to which they have given the name of the oils of wine, which, employed in infinitesimal quantities, suffice to flavour thousands of litres of liquids. To demonstrate the disastrous effects of these liquors, he performed several experiments before the audience on guinea-pigs, and said that if in man the effects were less prompt, they were just as disastrous. Dr. Laborde observed that the very wine we drink nowadays is only such in name, and to show how easy it was to manufacture wine he mixed in a glass of water some ethylic alcohol, adding some colouring matter of aniline and of the oil of French wine for the "bouquet," which was found very good to the taste.

Professor Guyon has been transferred from the chair of External Pathology at the Faculty of Medicine of Paris to that of Clinical Professor of Diseases of the Urinary Organs.

After a close contest between Drs. Terrier and Chauvel for the membership of the Academy of Medicine in the Section of Surgical Pathology, Dr. Chauvel, Professor of Surgery at Val-de-Grâce, was at the last meeting elected member.

Paris, March 25th.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

The Balneological Congress.

THE twelfth Balneological Congress began its sittings on the evening of the 7th inst. in the Pharmacological Institute of the University of Berlin, and elected Professor Liebreich president. Professor Liebreich delivered a report on the hygienic conditions of health resorts, which was followed by a short discussion. Dr. Zuntz of Berlin then spoke of the effect of walking, mountain climbing, and other muscular exercises on assimilation, and Dr. Haupt of Soden discourses on the importance of heredity in tuberculosis as compared with its propagation by the sputum, and on the value of mineral baths for those who have inherited the disease. One of the most interesting subjects touched upon in the course of the evening was the ozone water called antibactericon, prepared by the Berlin firm of Graf and Co., and the following facts were communicated. If one mixes water containing bacteria—Spree water, for instance—with anti-bactericon a momentary phosphorescence ensues. This observation induced Professor Liebreich to have the following experiment made. Some tubes of nutrient gelatine were inoculated in the usual manner with Spree water. To Spree water taken at the same place and time anti-bactericon was added in a dark room, and, after the phosphorescence had ceased, gelatine was inoculated with the mixture. After forty-eight hours it was found that colonies had developed abundantly in the former medium and none in the latter. This proves that the phosphorescence is due to the momentary oxidation of micro-organisms. One can make the same experiment more simply by pouring anti-bactericon in a dark room into a glass half full of water containing bacteria, whereupon the phosphorescence ensues, and then pouring in some more of the anti-bactericon, whereupon the phosphorescence will not take place, all the micro-organisms being already destroyed. These experiments succeed only if the ozone in the anti-bactericon is still feebly held. At the second meeting of the Congress on the 8th inst., Professor Kisch of Marienbad spoke on the connexion between corpulence and hæmorrhage; Dr. Schott of Nauheim and Dr. Jacob of Cudowa on nervous debility and diseases of the heart; Dr. Winternitz of Vienna on the regulation of warmth and the genesis of fever; and Dr. Markus of Pyrmont on his treatment of chlorosis. At the third and last meeting, Dr. Groedel of Nauheim and Professor Liebreich spoke on nervous palpitation and other affections of the heart due to enervation, and Dr. Boas of Berlin on the principles of dietetics in chronic diseases, especially in disease of the digestive organs. Dr. Lahusen of Munich exhibited his "patients' seats" and "patients' cells" for bathing purposes.

The Chair of Surgery at Halle.

Professor Bramann will enter on his duties as ordinary Professor of Surgery and head of the Surgical Hospital in Halle on the 1st of April. It will be remembered that it was he who, as von Bergmann's assistant, performed the

operation of tracheotomy on the Emperor Frederick (then Crown Prince) at San Remo.

A banquet will be given on April 8th in the so-called English House here in honour of the twenty-fifth anniversary of Leyden's being appointed a professor.

Berlin, March 25th.

Obituary.

INSPECTOR-GENERAL JOHN MACPHERSON, M.A., M.D.

ON the 17th inst., Dr. John Macpherson, Inspector-General of Hospitals (retired), died at 35, Curzon-street, Mayfair, after long and painful intestinal trouble. Dr. Macpherson was born at Old Aberdeen in 1817, being the son of Dr. Hugh Macpherson, Sub-principal and Professor of Greek in the University and King's College there. He was educated at the Grammar School, and subsequently at the University, where he was a very diligent and successful student, carrying off many prizes at an early age, and leaving on the minds of the professors so favourable an impression of his ability and character that, after following with interest his career in India for some years, they conferred on him the honorary degree of M.D., an unusual proceeding at that time. After an interval passed at King's College in London, he commenced the study of medicine at Aberdeen in 1834, by attending the anatomical lectures of Professor Pirrie. A year later he entered as a pupil at St. George's Hospital, London, and worked there, and in the Kinnerton-street school, until the spring of 1838. He then went abroad for twelve months, spending the time between the Universities of Bonn, Vienna, and Berlin. Returning to London in May, 1839, he passed the Royal College of Surgeons in the autumn of that year, and being offered a medical appointment in the Honourable East India Company's service in Bengal, he sailed for Calcutta in the December immediately following. After holding various temporary military charges, as was the usual lot of young assistant surgeons in those days, he was nominated in 1843 to the civil surgeoncy of Howrah, on the banks of the Hooghly, facing Calcutta. There he speedily set himself to extend the scope and usefulness of the Seamen's Hospital, an institution founded for the especial benefit of the officers and sailors of merchant ships visiting the port: and in it he gained a large experience in the treatment of tropical diseases. Transferred a few years later as Assistant Surgeon to the Calcutta European General Hospital, then presided over by Dr. Simon Nicolson, he continued in the post, having at the same time charge of the European and Native lunatic asylums, until his promotion to the rank of Surgeon; and for the later portion of that period he was practically the head of the General Hospital. On becoming Surgeon he was made secretary to the Medical Board (whose functions were a few years later transferred to a Director-General), but he soon resigned that office on being appointed a Presidency Surgeon in Calcutta, with the addition, shortly after, of the duties of Superintendent-General of Vaccination. These offices he continued to hold until he quitted India in 1864, with the rank of Inspector-General of Hospitals, after twenty-four years' uninterrupted service in Bengal. His only purely military service after the first two years was in 1846, when he joined the army of the Sutlej in the first Sikh war, and, after working in the field hospital, escorted a number of sick and wounded men to the convalescent depôt in the hills.

Dr. Macpherson was a man of great general acquirements. He was full of antiquarian lore, a great lover of art, and had made a fine collection of engravings. A good French, and still better German scholar, he kept himself well supplied with the contemporary professional literature of the Continent, and to the last retained a lively interest in the most recent views in medicine and surgery, both English and foreign. Very thorough in all he did, he was unremitting in his study of disease, both as seen in the living, and in the dead-house, and was most careful and conscientious in recording the results; while the very large number of cases of Indian fever, dysentery, and cholera which fell to him to treat, both in Europeans and natives, enabled him to speak and write on those subjects with special authority. Though from boyhood devoted to reading, he was of most active habits and a great walker, and being fond of botany and mineralogy, and mountain scenery, loved to take long rambles with knapsack on back and hammer in hand. On two longer tours, however, he looked back with special satisfaction—namely, one in the Scotch Highlands, the other in the Austrian Tyrol. No doubt his early visit to Germany and some of its baths, and his familiarity with its language, led to his often revisiting that country after his return to Europe, to his becoming specially interested in balneology, and to his eventually writing the useful and popular volume on that subject which bears his name. Dr. Macpherson was a man of rare judgment, sound sense, of ready and warm sympathy, but of a retiring and reserved character, sweet in disposition, noble and pure in all his aims, without a vestige of self-assertion. He was a fast friend, and his death will be deeply felt and his loss mourned by many who were attached to him outside the large family circle of which he was the centre.

Dr. Macpherson was the author of "Statistics of Dysentery," 1850; "Insanity amongst Europeans," 1853; "Report on Native Lunatic Asylums," 1855; "On Anti-periodics," 1856; "Cholera in its Home," 1866; "The Baths and Wells of Europe," third edition, 1888; "Our Baths and Wells," 1871; "Annals of Cholera up to 1817," 1884; besides minor works and contributions to various medical periodicals.

In dealing with the subject of Insanity amongst Europeans in Bengal, Dr. Macpherson, speaking from his large and special knowledge of the subject, combats the belief—at that time a widespread one—that Europeans resident in tropical climates are remarkably liable to diseases of the nervous system. He also states in his report that seven of nine of the post-mortem examinations which he performed in the Calcutta Lunatic Asylum showed no evidence of cerebral lesion. Of course, that statement, having been made in 1853, cannot now be regarded (recent additions to cerebral pathology being kept in mind) as an accurate record of facts; but there can be no doubt that it was trustworthy viewed by the lights of thirty-seven years ago. It is interesting to note that Dr. Macpherson records the fact, that in his treatment of the lunatics in the Calcutta Asylum restraint was almost unused. Delirium he treated with tartar emetic; and he preferred, amongst these insane patients, the use of leeches to any other method of blood-letting.

In his "Annals of Cholera," Dr. Macpherson details the results of his patient and laborious researches amongst the records relating to that disease. He tells us that cholera was first seen by Europeans in India in 1503, and that the first epidemic in which the disease was described by name in Europe occurred in Nismes in 1564. The first described epidemic of cholera was observed at Goa. In this work attention is drawn to a point which is of interest, not only in a general sense, but has a special application to this country to-day. It is a fact that in India parts of the country are known to have been at one time free, or all but free, from cholera, which are now its constant haunts. The opposite of that fact is also true—that is to say, the disease sometimes disappears, or all but disappears, from certain parts of India in which it has previously been of everyday occurrence. Dr. Macpherson also points out that there have been periods, lasting even over years, during which the whole of India itself was comparatively free from the ravages of this dreadful disease. These are the facts which, it is here suggested, should warn us, in England, against a belief which has been mentioned in the press on several occasions. It has been said that as we, in this country, escaped the disease altogether during the last epidemic of cholera, so we may reasonably hope to escape it when next cholera visits Europe in epidemic form. The writer would suggest that so long as we drink of the water of rivers into which houses drain, it is not reasonable to hope that cholera, or any disease like it, will cease, each after its kind, to remind us of our reckless disregard of the very A B C of the laws of public health. In his treatment of cholera, Dr. Macpherson placed no trust whatever in the curative powers of any drug. During his life of varied and curious experiences, it is said Dr. Macpherson made many friends amongst almost all classes of people, and in many countries. It is also told of him that, except by death, he never lost a friend. The man of whom that can be truly said must, when he dies, leave behind him many who deeply deplore his loss, and it is thus that Dr. Macpherson is mourned to-day.

AQUILLA SMITH, M.D., F.K.Q.C.P., M.R.I.A.

AT the ripe age of eighty-four years Dr. Aquilla Smith, died on the 23rd inst. at his residence in Lower Baggot-street, Dublin. For some years past he had resigned practice, and gradually given up his medical appointments. He was educated at Kirby's Original School of Medicine and the School of Physic, Trinity College, and obtained the Fellowship of the College of Physicians in 1839, and the same year the Honorary M.D. Degree of the University of Dublin. He held for many years the post of physician to Sir P. Dun's Hospital was King's Professor of Materia Medica and Pharmacy; and acted as representative of the College of Physicians in the General Medical Council. He was also the treasurer of the College of Physicians and Vice-President of the Pharmaceutical Society of Ireland. The deceased was lately presented with a portrait in oils and an illuminated address by his professional friends. He was the author of a paper, among others, published in the *Dublin Journal of Medical Science*, entitled "Some Account of the Origin and Early History of the College of Physicians in Ireland."

HENRY GRAMSHAW, L.R.C.P. LOND., M.R.C.S., &c.

HENRY GRAMSHAW, whose death we recorded in our issue of March 15th as having occurred at West Brighton on Feb. 28th, aged sixty-two, was the youngest son of William Farbrace Gramshaw, surgeon of Hinckley, Leicestershire. He was educated at Birkenhead, and went through his medical curriculum at University College, London. As a student he endeared himself to a large circle of medical friends, and gave every promise of a distinguished career. In 1850 he took the gold medal and the first certificate in midwifery. Immediately on becoming qualified he married the youngest daughter of George Morgan, Esq., of Thornbush Hall, Bramford, Suffolk, and settled down at Tettenhall, Staffordshire, where, however, he only remained for a few years. For fourteen or fifteen years he carried on a large county practice at Laxfield, Suffolk. He was very popular, and in him rich and poor alike found a true and faithful friend. He devoted much of his time to the study of psychological medicine and the home treatment of mental cases with marked success; but unfortunately his restless ambition always prevented bim from achieving success or making much money by his professional work. Feeling always fitted to hold a higher and better position than fate or circumstances gave him, he was perpetually striving after the unattainable, and so never would rest satisfied with his position and prospects. He was a great admirer of Dickens and had a keen sense of humour. His powers of conversation were exceptional, and he spoke in public with exceeding ability. He had a facile pen, and wrote much both in prose and verse. His letters were models of composition; he had a terse, happy way of giving his correspondents an insight into all that interested him, with keen flashes of wit and humorous allusions to passages in his favourite authors. He was well up in his professional work, and inspired confidence in all who consulted him. As an obstetrician he was much thought of, and deservedly so, for nothing in the way of emergency daunted him. He had countless friends, and to have his mere acquaintance was to like and admire him. He gave up active practice, and devoted himself to the treatment of "borderland" lunacy cases, as, owing to chronic bronchitis and winter cough, he found himself unable to stand the exposure of continual night work. He resided for a few years at Kew Gardens, where Mrs. Gramshaw died. In 1888 he had frequent attacks of giddiness, which culminated in slight hemiplegia. He retired to Brighton, and seemed to have better health. During the last week in February he wrote cheerfully of the advent of spring and the prospective return of warmer weather. But, unfortunately, a cold aggravated his chronic winter cough into acute bronchitis, which caused his death after only three days' severe illness. He recently received a severe shock on hearing of the death of his second son, Capt. L. H. Gramshaw, Royal Fusiliers, who died of fever at Kau, Upper Burmah, in January last, whilst serving as aide-de-camp to Brigadier General Symonds in the Chin Lushai Expedition. He recently married again, and leaves, besides the surviving members of his first family, a widow and one child.

JAMES HARRY POLAND, M.R.C.S., L.S.A., D.P.H.

MR. J. H. POLAND was the eldest son of the late Mr. Alfred Poland, the well-known surgeon of Guy's Hospital. He was lost in the terrible wreck of the British s.s. *Quetta* in the Torres Straits, near Somerset, Queensland, on Feb. 28th last. Only 149 of the crew and passengers were reported as saved out of a total of 282. During his curriculum at Guy's Hospital Mr. Poland held the post of Demonstrator of Chemistry, a science in which he was very proficient, and was elected a Fellow of the Chemical Society. He was also an undergraduate of the University of London. After qualifying in 1877 he went to Australia in September, 1878, on account of some kidney affection, and there held many valuable appointments—viz., Chief Medical Officer to Sandhurst Hospital, Victoria; Resident Surgeon to Balranald Hospital, New South Wales; and Hon. Medical Officer, Rockhampton Hospital, Queensland. In 1884 he was appointed by the Queensland Government Surgeon-Superintendent to the Queensland Emigration Service, which post he held up to the time of his death. He had taken the *Quetta* out to Australia with emigrants, and was on his passage home. His wife, who was the daughter of Mr. Charles Poland, of Aucklands, Littlehampton, Sussex, and whom he married in 1877, was also lost in the disaster. Immediately before commencing the voyage out last December he had passed the examinations and obtained the diplomas in Public Health of the Royal College of Surgeons of Ireland, and of the Royal Colleges of Physicians and Surgeons of England. He was thirty-four years of age, and co-editor of the *Australian Medical Gazette*.

THE SERVICES.

VOLUNTEER CORPS.—*Artillery:* 5th Lancashire: Acting Surgeon C. W. Dean to be Surgeon (dated March 22nd, 1890). 1st West Riding of Yorkshire (Western Division, Royal Artillery): William Gay, M.D., to be Acting Surgeon (dated March 22nd, 1890).—*Royal Engineers* (Fortress and Railway Forces): 1st Gloucestershire: William Cox, Gent., to be Acting Surgeon (dated March 22nd, 1890).—*Rifle:* 4th Volunteer Battalion, the Cheshire Regiment: Edward Chamberlayne, Gent., to be Acting Surgeon (dated March 22nd, 1890).

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

AT an extraordinary meeting of the Council of this College held on Thursday, the 27th inst., the minutes of the ordinary Council of March 13th were read and confirmed.

The Report, dated March 19th, 1890, of the Committee of Delegates of the Royal College of Physicians of London and of the Royal College of Surgeons of England, appointed to consider and report to the two Colleges on the scheme for the reconstitution of the University of London, was read, approved, adopted, and entered on the minutes. This report is to be considered by the Royal College of Physicians at their meeting to-day (Friday).

Permission was given to Mr. Gerald F. Yeo to use the ward-rooms of the College for the purpose of original research, not involving vivisection.

EYE AND EAR HOSPITAL, BRADFORD.—The annual report of this institution shows that during the last year 3755 new cases came under treatment, and 496 were admitted as in-patients. The number of major operations performed was 485, including 65 cases of extraction of senile cataract. In nearly every case preliminary iridectomy was performed. During the last three years there had not been a single case of suppuration. Two shuttle accidents were recorded; 367 cases of accident, or disease due to accident, were admitted. There was a large number of cases of error of refraction—no less than 1187; of these, 864 were cases of hyperopia, 120 of myopia, and 223 of astigmatism. Over 1500 spectacles were ordered. Arrangements have been made for admitting cases of disease of the nose and throat. The expenditure was £1793.

Medical News.

UNIVERSITY OF CAMBRIDGE.—The Easter examinations for medical and surgical degrees will take place according to the subjoined plan, subject to alterations which will be duly notified. The first part of the first examination (Chemistry and Physics) will be taken on the 3rd, 5th, 6th, and 7th of June. The second part (Elementary Biology) on the 9th, 10th, and 11th. In the second examination Pharmaceutical Chemistry will be taken on the 9th, 10th, and 11th of that month, and Human Anatomy and Physiology on the 3rd, 5th, 6th, 7th, 9th, and 10th. The different subjects included in the first part of the third examination will be taken on May 13th, 14th, 16th, 17th, and 19th, and the second part on May 13th, 14th, 15th, 16th, 20th, and 21st. The examination for the degree of Master of Surgery will be conducted on May 16th, 17th, and 19th. Names of candidates for the third examination must be sent to the Registry on or before April 30th, and those for the first or second examinations on or before Monday, May 19th.

COLLEGE OF PHYSICIANS IN IRELAND.—At the February and March examinations the following obtained the Licences in Medicine and Midwifery of the College:—Medicine: James Byrnes, George John Cressy, Joseph William Gallagher, William Patrick Lee, Alexander V. Shine, and William George Ternan. Midwifery: James Byrnes, George John Cressy, Alexander V. Shine, and William George Ternan.

MEDICAL MAGISTRATE.—Mr. D. Hartley, M.R.C.S., of Accrington, has been put upon the Commission of the Peace for that borough.

ST. GEORGE'S HOSPITAL.—On March 17th Dr. Humphry Davy Rolleston was elected Curator of the Pathological Museum at this hospital.

MR. G. E. A. MAYHEW, L.R.C.P. Lond., M.R.C.S., has been appointed County Coroner of Devizes, which has recently been established into a county coroner's district.

A NEW HOME FOR LEPERS, INDIA.—Prince Albert Victor, on Tuesday, laid the foundation stone of a new home for lepers, which has been founded at Bombay by the generosity of Sir Dinshaw Petit, Bart.

LITERARY INTELLIGENCE.—Messrs. Percival and Co. announce that a second edition of the "Annals of Influenza," by Dr. Theophilus Thompson, originally published by the Sydenham Society, will shortly be ready. The new edition has been edited by Dr. E. Symes Thompson, and will contain reports of the epidemic of 1847, as well as of that of 1889–90.

IN MEMORIAM.—By the invitation of the friends of the late Mr. M. A. Ottley, L.K.Q.C.P.Irel. and M.R.C.S. Eng., of Attercliffe, a well-attended meeting was held in that town last week, to consider the desirability of raising a fund for the purpose of erecting some perpetual memorial of that gentleman. The proposal submitted to the meeting met with a unanimous approval, and a large representative committee was formed to promote the attainment of the object in view.

SHEFFIELD GENERAL INFIRMARY.—The usual quarterly meeting of the governors of this hospital was held last week at the institution. It was stated that Mr. A. Jackson and Mr. S. Snell had presented to the board, on behalf of a number of personal friends, an oil portrait of Joseph Law, Esq., M.D., who was honorary physician from 1866 to 1887. The painting—a faithful likeness of the doctor—was executed by Miss Jean Mitchell, and will be hung in the board-room of the infirmary.

YORK COUNTY HOSPITAL.—During the past year there was a considerable improvement in the financial condition of the institution. The year commenced with a deficiency of upwards of £1400, and with an estimated extraordinary expenditure of £600 for sanitary improvements required by the urban sanitary authority. The appeal by a house-to-house collection, in September, for funds had been a success. During the twelve months the good work done by the institution had been largely extended, the number of both in- and out-patients being far in excess of that of 1888.

MISSION TO DEEP-SEA FISHERMEN.—A donation of £500 for the general funds has been received by the Council towards the maintenance of the new medical mission ship *Albert*.

SOCIETY FOR THE STUDY OF INEBRIETY.—The annual meeting of this Society will be held in the afternoon of April 1st in the rooms of the Medical Society of London, Chandos-street, Cavendish-square, when the address by the President, Dr. Norman Kerr, will be delivered.

FOOTBALL CASUALTIES.—On Saturday last a young man, named Shoesmith, while playing in a Rugby football match at Whitworth, sustained an injury to his spine, and died on Tuesday.—A man, named Geary, of the Everton Club, while playing in the International trial match at Nottingham on Monday was accidentally knocked against the corner of a seat, which produced concussion of the brain.

MEDICO-PSYCHOLOGICAL ASSOCIATION.—At the quarterly meeting held in Owens College, Manchester, on Thursday, March 13th, Dr. Régis, Professor of Mental Medicine, Bordeaux, and Dr. Ritti, Physician to Charenton, were elected corresponding members, and the following were elected ordinary members—viz.: William Gilmore Ellis, M.D. Brux.; John Spence Law, M.B., C.M. Edin.; Alfred W. Campbell, M.B., C.M. Edin.; William Woodward, L.R.C.P., M.R.C.S.; Anton Hugh Syrée, M.R.C.S., L.S.A.; John James Pitcairn, L.R.C.P., M.R.C.S.; Walter Scowcroft, M.R.C.S.; and George Findlay, M.B., C.M. Aber.

BEQUESTS AND DONATIONS TO HOSPITALS.—The late Mrs. Edward King of Andover has bequeathed £1000 to the Andover Cottage Hospital.—The London Temperance Hospital has received £5000 under a trust deed executed by the late Mr. George Sturge of Sydenham-hill.—The late Mr. Justice Manisty has left by his will £250 each to St. Mary's Hospital, Paddington, and the London Fever Hospital.—A legacy of £1000, left by the late Mr. Isaac Denton, has been paid to the treasurer of the Royal Southern Hospital, Liverpool.—Mr. W. Banister, late of Mayfield, West Derby, bequeathed £200 to the Royal Infirmary, and £100 each to the Northern and Southern Hospitals.

PRESENTATIONS.—Dr. Constable of 127, Kennington-park-road, medical officer of the Kennington Branch of the United Patriots' National Benefit Society, received a handsome testimonial from that body on Tuesday evening last at their annual dinner at the "Horns," Kennington. An illuminated address bore the words, "Presented to Dr. J. J. Constable, together with a service of fish eaters and carvers, in recognition of his skill and courtesy to the members of the Kennington Branch of the United Patriots' National Benefit Society." The recipient was loudly cheered both at the commencement and conclusion of his acknowledgment. Mr. Wheeler, General Secretary of the Order, and Mr. E. Mitchell, trustee, also bore testimony to the doctor's genial disposition and undoubted ability.—Mr. W. Wynne, L.R.C.P., L.R.C.S. Edin., who has been labouring among the lepers of Robbins Island, has, on the occasion of his leaving the island, been presented with an address signed by all the members of the leper community, and a purse, in acknowledgment of his courtesy and professional skill.—On the evening of March 1st Dr. Dinshaw Edalji Sabja, Assistant Surgeon, G. I. P. Railway, was presented by his friends with a beautiful obstetric case in recognition of his zealous and impartial services while in charge of the medical work of the district of Sholapur, Bombay. Mr. Carreras, District Traffic Superintendent, presided, and spoke in terms of high appreciation of the medical services of Mr. Sabja.

MEDICAL NOTES IN PARLIAMENT.

The Property of Hospitals.

IN the House of Lords, on the 20th inst., Lord Sandhurst asked whether Her Majesty's Government would agree to an inquiry by a Select Committee with regard to all hospitals, provident and other public dispensaries, and charitable institutions within the metropolitan area for the care or treatment of the sick poor which possessed real property or invested personal property in the nature of endowment of a permanent or temporary nature.—Viscount Cranbrook said that the scope of the proposed inquiry, as it was put upon the paper, was one the Government could assent to; and if the noble lord would move for

a committee on the subject, the motion would receive the hearty support of the Government.—Lord Sandhurst said that on an early date he would move the appointment of a committee.

The Sweating System.

In the House of Lords, on Monday, the 24th inst., the Earl of Dunraven moved to be exempted from further attendance on the Select Committee on the Sweating System. The motion was agreed to.

In the House of Commons, on the 20th inst., Mr. W. H. Smith, in reply, to Mr. B. Robinson, stated that he was not in a position to give any pledge with regard to the Sweating Committee, but he had reason to believe that the report would undoubtedly be presented within the present session.

Open Spaces Bill.

In the House of Lords on Thursday, the 27th inst., the Earl of Meath moved the second reading of this Bill, and Lord De Ramsey, speaking for the Home Office, said that some of its provisions would have to be very carefully scrutinised. The Bill was read a second time and sent to the Committee on Law.

Lunacy Consolidation Bill.

In the House of Commons, on the 20th inst., on the motion for the second reading of this Bill, Dr. Tanner objected, and Mr. W. H. Smith explained that the Bill must be read a second time in the interests of the community, as it was necessary that the law should be consolidated before May 1st.—Mr. Matthews having explained that the Bill was to be referred to a Select Committee, Dr. Tanner said that on that understanding he would on this occasion allow the Bill to pass. The Bill was then read a second time.

On Thursday, the 27th inst., the House went into Committee on this Bill, and, in reply to Mr. A. Pease, the Solicitor-General said the intention was to include in the Bill the exact provisions of the Act passed last year, and care would be taken to guard against any omission. In reply to Mr. O'Connor, the Solicitor-General said that the Bill did not purport to contain all the enactments, and it would be seen from Clauses 270 or 274 that criminal lunatics were entirely outside its purport. The clause was agreed to and the Bill passed through Committee, and was reported.

Infectious Disease (Prevention) Bill.

On the 20th inst., Dr. Farquharson moved that the House resolve itself into Committee on this Bill.—Dr. Tanner objected, but waived his objection on the appeal of Mr. Sexton.

On Wednesday, March 26th, this Bill was in Committee when the House adjourned.

Tuberculosis.

On Friday, the 21st inst., Mr. Knowles called attention to the subject of tuberculosis, which, he said, was very prevalent among aged milch cows of the Ayrshire and shorthorn breeds, and, dwelling upon the danger of the disease being transmitted from animals to human beings, urged the expediency of the disease being included in the schedule to the Contagious Diseases (Animals) Act.—Dr. Farquharson, in the course of an elaborate description of the way in which the disease is propagated, enlarged upon the danger to which human beings are exposed in consequence of cattle being afflicted with tuberculosis, and maintained that it was the duty of the Agricultural Department to find some remedy.—Mr. M. Stewart, speaking on behalf of cattle breeders, admitted that the disease was increasing in cattle, and joined in urging the Agricultural Department to adopt stringent measures for watching its progress.—Mr. Chaplin, pointing out that great differences of opinion prevailed among scientists with regard to the disease, contended that at present the subject was one demanding the attention of experts rather than of his department, and he was satisfied, he said, that no order of the Board of Agriculture would lead to the extermination of the disease, because there was every reason to believe that the disease was communicated from man to animals as well as from animals to man.—Sir L. Playfair, dwelling upon the increase of consumption in children, which, he said, was largely due to the use of tuberculous milk, appealed to Mr. Chaplin to take steps to mitigate what he regarded as a very serious evil.

Medical Requirements in Emigrant Ships.

Dr. Tanner two years ago had framed an amendment to call attention to the insufficient provision for medical requirements on board Atlantic liners for steerage passengers and to the risk of master mariners having to act as physicians on long voyages. For the welfare of emigrants few things were more essential than proper medical attendance during their sorrowful voyage out. If better men were not available in sufficient numbers, the duty might be allotted to medical gentlemen who had only completed half the course.—Mr. Jackson assured Dr. Tanner that the subject he had brought forward was under the consideration of the President of the Board of Trade.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column are invited to forward it to THE LANCET Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.

ADAMS, J. D., M.R.C.S., has been reappointed Medical Officer for the Yeovil Rural District.

BARRETT, R. H., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the No. 2 and No. 3 Districts of the Wisbech Union.

BODMER, RICHD., has been appointed Analyst of St. Saviour's District, St. Saviour's Union, Borough, London.

BODY, H. M., M.R.C.S., has been reappointed Medical Officer for the Tedburn St. Mary District of the St. Thomas Union.

BONSALL, G. R. E., L.R.C.P. & L.R.C.S. Edin., has been reappointed Medical Officer and Public Vaccinator to the Aberystwith Union Workhouse and District. Also Medical Officer to the Ancient Order of Foresters, Aberystwith.

BROWN, A. Y., M.B., B.S. Lond., has been appointed House Physician to Guy's Hospital.

BROWN, D., L.K.Q.C.P. Irel., M.R.C.S., has been appointed Medical Officer to the Workhouse of the New Winchester Union.

COLLINS, FRANK, L.R.C.P., M.R.C.S., has been appointed Medical Officer to the Merchant Seamen's Orphan Asylum, Snaresbrook; also Divisional Surgeon to the Police, Wanstead (J Division), vice Geo. Weller, M.R.C.S., L.S.A., retired.

FAICHNIE, NORMAN, M.B., B. Sch. Dur., has been appointed Resident Clinical Assistant to the St. Marylebone Infirmary, vice B. S. Johnson.

FORREST, J. G. S., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Finchingfield District of the Braintree Union.

GRAY, F. A., L.R.C.P. Lond., M.R.C.S., has been reappointed Medical Officer for Newton Poppleford, St. Thomas Union.

HAGUE, J. L., L.R.C.P. Lond., late House Physician to the Westminster Hospital, has been appointed Resident Assistant Medical Officer to the South-Eastern Fever Hospital, New Cross.

HASLEWOOD, A. O., M.R.C.S., has been reappointed Medical Officer of the Hearts of Oak Medical Agency at Buxton.

HICKMAN, H. V., L.R.C.P., M.R.C.S., has been appointed Assistant House Physician to Guy's Hospital.

HOLMAN, H. J., L.R.C.P., M.R.C.S., has been appointed House Surgeon to Guy's Hospital.

JOHNSTON, G. J. W., M.D. Irel., has been appointed Surgeon to the Gainsborough Friendly Societies' Medical Association.

MACKEITH, A. A., M.B., C.M. Glas., has been reappointed Medical Officer for the Bramford-Speke District of St. Thomas Union.

MACKINTOSH, A., M.D. Glas., has been reappointed Medical Officer for the Dronfield and Clay Lane Union Districts.

MANLEY, J. H. H., M.R.C.S., has been appointed Medical Officer for the West Bromwich Union District.

MANNING, F. B., L.K.Q.C.P. Irel., has been appointed Medical Officer for the Ninth District of the Barnstaple Union.

MCCANN, F. J., M.B. Edin., has been appointed Resident Medical Officer to the Queen Charlotte Lying-in Hospital, vice C. P. White, M.R.C.S., resigned.

PARSONS, F. J. C., L.R.C.P. Lond., M.R.C.S., has been reappointed Medical Officer of the Port, Bridgwater.

PENBERTHY, W., M.R.C.S., L.R.C.P., has been appointed House Surgeon to the London Hospital.

PENDLEBURY, J. P., L.R.C.P., M.R.C.S., has been appointed House Physician to Guy's Hospital.

PUDDICOMBE, E. L., L.R.C.P. Lond., M.R.C.S., has been reappointed Medical Officer for the Rewe District of the St. Thomas Union.

REYNOLDS, H. S., L.R.C.P. Edin., has been appointed Medical Officer for the Fourth District of the Royston Union, vice Earle, resigned.

SMITH, J. W., L.R.C.P., M.R.C.S., has been appointed House Surgeon to Guy's Hospital.

SOUTHEY, A. J., M.R.C.S., has been reappointed Medical Officer for the Slough Union Districts.

STEPHENS, EDWARD, L.R.C.P. Edin., M.R.C.S., has been reappointed Medical Officer for Chard Rural District.

THOMPSON, T. W., L.R.C.P. Edin., M.R.C.S., has been reappointed Medical Officer for Great Berkhamsted.

WEIR, A. MCC., M.D. Irel., L.R.C.S. Edin., has been appointed Medical Officer for the Evershot District of the Beaminster Union, vice Butler, resigned.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement.

ABERYSTWITH INFIRMARY, Aberystwith.—House Surgeon. Salary £150 per annum, with board, lodgings, coal and gas, and attendance; no beer, wine, or spirits allowed.

BATH GENERAL OR ROYAL MINERAL WATER HOSPITAL.—Resident Medical Officer. Salary £100 per annum, with board and apartments in the Hospital.

BETHLEM HOSPITAL.—Two Resident Clinical Assistants. Residence for a term generally of six months. Such apartments, rations, and attendance provided as the committee consider reasonable. (Apply at Bridewell Hospital, Blackfriars, E.C.)

CHELSEA, BROMPTON, AND BELGRAVE DISPENSARY, 41, Sloane-square, S.W.—Surgeon.

CHELSEA HOSPITAL FOR WOMEN, Fulham-road, S.W.—Dispenser. Salary £70 per annum.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria Park, E.—Pathologist. Salary £100 per annum. (Apply to the Secretary, 24, Finsbury-circus, E.C.)

EAST LONDON HOSPITAL FOR CHILDREN, Shadwell, E.—House Physician. No salary, but board and lodging are provided free of cost.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton. House Physicians.

HOSPITAL FOR DISEASES OF THE THROAT, Golden-square, London.—Resident Medical Officer. Salary £50 a year, with board and rooms.

HOSPITAL FOR WOMEN (London School of Gynæcology), Soho-square, W.—Clinical Assistants in both Out-patient and In-patient Departments.

HOSPITAL, King's Lynn.—House Surgeon and Secretary. Salary £80, rising by annual increments of £10 to £100 per annum, with residence, board, washing, and attendance.

KENT COUNTY ASYLUM, Barming-heath, Maidstone.—Senior Assistant Medical Officer; salary £250 per annum, with furnished quarters, attendance, coal, gas, washing, garden produce, and milk. Also Second Assistant Medical Officer; salary £180 per annum, with same allowance as Senior Assistant. Also Third Assistant Medical Officer; salary £150 per annum, with same allowance as Senior Assistant.

KING'S COLLEGE, London.—Chair of Psychological Medicine

MESSRS. PEARCE, JONES, AND CO., 23, John-street, Bedford-row, London.—Resident Medical Superintendent for an old-established Private Asylum in the North of England. Salary, with furnished apartments and board, £300 per annum.

METROPOLITAN HOSPITAL, Kingsland-road, E.—Obstetric Physician; also House Physician and House Surgeon, each tenable for one year; and also Assistant House Surgeon, tenable for six months. The House Physician and House Surgeon will each receive a salary at the rate of £60 per annum for the first six months, and at the rate of £70 per annum for the second six months.

OWENS COLLEGE, Manchester.—Senior Demonstrator in Physiology. Stipend £150 per annum.

RANGOON MUNICIPALITY.—Health Officer to the Municipality. Salary Rs. 600 per mensem, rising by annual increments of Rs. 50 per annum to Rs. 1000. (Apply to Mr. J. Short, Secretary, Rangoon Municipality.)

ROYAL COLLEGE OF PHYSICIANS, London.—Milroy Lecturer on State Medicine and Public Health.

STOCKTON-ON-TEES HOSPITAL AND DISPENSARY.—House Surgeon (non-resident). Salary £200 per annum.

ST. PETER'S HOSPITAL FOR STONE AND URINARY DISEASES, Henrietta-street, Covent-garden.—House Surgeon for six months. Honorarium 25 guineas, board, lodging, and washing.

UNIVERSITY OF EDINBURGH.—An additional Examiner. Salary £90 a year, with an allowance of £10 a year for travelling and other expenses in the case of an examiner not resident in Edinburgh or the immediate neighbourhood.

WESTERN GENERAL DISPENSARY, Marylebone-road.—Junior House Surgeon. Salary £50 per annum, with board and residence.

Births, Marriages, and Deaths.

BIRTHS.

ALLNUTT.—On March 21st, at The Limes, Wrentham, Suffolk, the wife of John Allnutt, surgeon, of a daughter.

BOLTON.—On March 16th, at Kustendjie, Roumania, the wife of A. Irwin Bolton, A.B., M.B., of a son (Thomas Francis Allan).

CORBETT.—On March 24th, at Copenhagen House, Warley, the wife of Surgeon-Major R. de la Cour Corbett, M.D., D.S.O., Army Medical Staff, of a daughter.

GUINNESS.—On March 24th, at Bampton, North Devon, the wife of T. A. Guinness, M.R.C.S., of a daughter.

HOLMES.—On March 19th, the wife of Dr. W. Reid Holmes, of Clifford-street, W., of a daughter.

JULER.—On March 18th, at Wimpole-street, W., the wife of Henry Juler, F.R.C.S., of a daughter.

MARRIAGES.

CROSS—BURRELL.—On March 18th, at St. John the Evangelist's, Penge, Arthur John Graham Cross, M.D., eldest son of Robert Cross, M.D., of Berkeley-square, to Lizzie (Tiny), daughter of Henry Burrell, Esq., of St. Martin's, Anerley, and Feilding, New Zealand.

DAVIES—GAZZANA.—On March 19th, at St. Michael and All Angels', North Kensington, Dr. John Davies, F.R.G.S., of New North-road, to Emily Antonietta (Minnie), eldest daughter of the late George J. Gazzana, Esq., of Cambridge-gardens, W.

FACEY—GOSDEN.—On March 20th, at St. Stephen's, Gloucester-road, W. E. Facey, B.A., M.B.Cantab., of Maldon, Essex, to Ellen Jane (Dot), elder daughter of James Gosden, of Duxford, Cambridge.

MACKINTOSH—WILLIAMS.—On March 19th, at Trinity Church, Hampstead, Dr. Malcolm Mackintosh, of Clapham, eldest son of Malcolm Mackintosh, of Rowallan, Kilmarnock, N.B., to Elizabeth Hilda, second daughter of J. C. Williams, of Hilgrove-road, Hampstead.

PARKER—PEARSE.—On March 19th, at the Parish Church, Westoning, Beds, by the father of the bride, Herbert Parker, M.R.C.S., of Gray's Inn, to Lucy Pearse, eldest daughter of the Rev. A. H. Pearse, Curate of Westoning, Beds.

DEATHS.

ANSTIE.—On March 16th, at Berachah, Kerley-road, Bournemouth, William Charles Anstie, L.R.C.P. Lond., M.R.C.S. Eng., aged 26, the beloved, most loving, and only son of Blanche Miller Anstie and the late Francis Edmund Anstie, M.D., F.R.C.P. Lond.

BALY.—On March 25th, at Warwick, Joseph Sugar Baly, M.R.C.S., Medical Officer of Health for Leamington Priors.

BROWN.—On Jan. 9th, at Snowtown, South Australia, very suddenly, Horatio Ross Brown, L.R.C.P. & L.R.C.S. Edin., aged 43.

CAVANAGH.—On March 24th, at his residence, 167, Islington, Liverpool, James Walter Cavanagh, L.R.C.P.Edin., M.R.C.S., aged 63.

COLLIER.—On March 24th, at his residence, Brook House, Carbrook, Sheffield, Wm. Henry Collier, L.R.C.P.Edin., aged 48.

FORBES.—On March 17th, at his residence, Johnstone-street, Bath, Surgeon-Gen. John Forbes, M.R.C.P., F.R.C.S., Retired Inspector-General of Hospitals, Madras Army.

FORBES.—On March 31st, suddenly, John Gregory Forbes, F.R.C.S., late of Ellerslie, Widmore-road, Bromley, Kent, aged 69.

HILL.—On March 20th, at Colville-houses, Bayswater, Fleet Surgeon Wm. George Hill, R.N., F.R.C.S.I., F.K.Q.C.P.I., late of The Belfry, Fermoy, youngest son of the late Arundel Hill, of Greig, Doneraile.

KENDALL.—On March 20th, at Renfrew, Burnt Ash Hill, Lee, Surgeon-Gen. Henry Kendall, M.D., A.M.D., retired, late of Bexley-heath, aged 69.

RUTHERFORD.—On March 21st, at Newcastle-on-Tyne, John Hunter Rutherford, L.R.C.P., L.R.C.S. Edin., aged 64.

WATKINS.—On March 17th, at Gwy House, Chepstow, George Watkins, Esq., surgeon, aged 81.

N.B.—A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, March 27th, 1890.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp	Rainfall.	Remarks at 8.30 a.m.
Mar. 21	29·61	W.	40	38	75	52	35	·13	Hazy
,, 22	29·77	W.	43	42	90	55	38	·04	Overcast
,, 23	29·73	W.	48	46	74	52	43	·01	Cloudy
,, 24	29·57	S.W.	43	42	66	48	39	·25	Cloudy
,, 25	29·26	S.W.	47	45	78	56	42	·22	Overcast
,, 26	29·78	S.W.	49	47	90	62	43	·03	Cloudy
,, 27	30·05	W.	52	51	74	55	48	..	Overcast

Notes, Short Comments, & Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editors."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "To the Publisher."*

We cannot undertake to return MSS. not used.

ADVERTISEMENT OF PROFESSIONAL ADDRESSES.

WE regret to see in the circular of the Grosvenor Hospital for Women and Children, in which an appeal is made to the public, the full names and addresses of various leading physicians and surgeons. We assume that such an objectionable procedure does not carry the approval of these gentlemen.

Mr. Weiss is referred to a general notice at the head of this column.

THE INFLUENZA.

To the Editors of THE LANCET.

SIRS,—I would ask why should we go to Russia for the source of the influenza? And I ask because I am told, on very good authority, that in this part of the country as early as Oct. 14th lambs began to suffer from a malady "the like of which" has certainly not been known for more than twenty years. In one farm not one lamb out of 500 escaped, and at first, until skilled treatment was brought in, more than twenty died. This epidemic amongst the lambs having finished, every horse on this farm was seized with undoubted influenza. The horses having finished, then the owner, his wife, his son, and his servants were all ill with the influenza. And this sequel of events was the same on two adjoining farms, and, for aught I know, on many others.

I am, Sirs, yours faithfully,

Canterbury, March 18th, 1890. PUGIN THORNTON.

To the Editors of THE LANCET.

SIRS,—Having read the numerous reports &c. of the influenza in your valuable journal, and seeing that the remedies which have been employed in treatment are of so diverse a nature, it seems to me that much might be learned by a free discussion as to the relative merits of each. The remedies most lauded seem to be antipyrin, antifebrin, salicylates, and ammonia compounds. Now, valuable as many of these undoubtedly are, in suitable cases, to relieve pain, it does seem to me that, as diminishing the fibrin-forming power of the already much impoverished blood, they are, where bronchial catarrh is a prominent symptom, distinctly contraindicated. Nay, further, the reports would indicate that the use of these drugs has been the means of precipitating and intensifying bronchial and pulmonary mischief by increasing effusion into the pulmonary tract. And yet Prof. Fraser has lately asked us to try exalgine!

Comparing the results of treatment, I find that the most rapid cures have been effected by combinations of iron with peripheral vascular stimulants, as spirits of nitrous ether, and that retarded convalescence and such sequelæ as bronchitis and pneumonia were the rule where such remedies as antipyrin and ammonia compounds have been used.

I am, Sirs, your obedient servant,

A. HANBURY FREER, M.B., C.M.Edin.

Wickham Market, March 22nd, 1890.

"EXCISION FOR PROLAPSE OF RECTUM."

To the Editors of THE LANCET.

SIRS,—Mr. Treves' reply to my letter raises several issues; but first let me assuage his anger at my assumption of anonymity, and explain

As regards Mr. Treves, there could be no question of secretiveness on my part; for I sent the patient to see him, and he soon knew I was the delinquent, if such a term be appropriate. But I desire to say that I deliberately preferred a *nom de plume* because long experience has taught me that surgical opinions or procedures are much too often not received on their merits, but are enhanced or damaged by the name of the individual appended to them. I desired to avoid this frequent consequence of our imperfect human nature, and thought, possibly wrongly, that the signature "Hospital Surgeon" might carry more weight. Seeing that my object was a surgical, not a personal, one, I still fail to understand any other objection to the mode I adopted, except that there seems to be a general prejudice against all anonymous contributions. I am naturally heterodox, and I care not how anonymous a letter dealing with me may be, provided it be honest and fair. I respectfully submit that I have been both of these; and lest those outside our hospital should think that there is, or has been, any personal difference between Mr. Treves and myself, I take this opportunity of saying that, so far as I know, such an assumption is totally unfounded. In fact, and in my opinion, it is to such enterprising surgeons as Mr. Treves, Mr. Fenwick, and others at our hospital, and, happily, throughout the country, that I look for the future advancement of that art and practice which all true surgeons must desire; but while unreservedly doing this, I must hold to myself the right of private judgment—to be publicly expressed, if necessary, but always under the proviso that I do so fairly and without *malice prepense*.

I am, as Mr. Treves says, "shocked" as well as he, for he says he "discovered" the name of the author of the letter. What "discovery" can there be when I voluntarily sent the case to him? This leads me to say that I had precedent for the course I adopted, but that if I had wanted any, Mr. Treves has himself supplied it, and in a way which, I feel sure, he did not intend; for in his paper describing the case under discussion he states (p. 454) that the woman had been previously in hospital (of course, under his senior colleagues) and had been burned, and at the conclusion of his article he writes: "Of all these methods, it may be said that they are clumsy, uncouth, uncertain, and unsafe, &c." Now Mr. Treves had weeks, if not months, in which to reflect over his words, and he has committed to print, and doubtless corrected proofs, a sweeping indictment against his senior colleagues. I do not think he deliberately intended to do any such thing, but the fact remains that he has done so, and I think, after this, I am entitled to claim that if there be any *lex non scripta* concerning our behaviour in matters of scientific difference with our colleagues, I am not the greater sinner. But this is not all. In my letter I said, "I have advised the patient *to see* Mr. Treves as soon as possible." The italics are mine. Now, in his reply, Mr. Treves says: "The patient is about to be re-admitted into the hospital, and I should [*sic*] be pleased to show the case to any surgeon who may be interested in the matter." As already stated, I sent the patient to *see* Mr. Treves, but I did not transfer the case to him. Not that I have the least objection so to do, or to court expert examination. I simply mention these matters to show that if on either side there be any breach of hospital etiquette, I am not the greater transgressor.

Yet another point raised by Mr. Treves. He says: "I might be excused for expressing the belief that the circumstances under which the anonymous letter was written were at least unhappy." I entirely fail to comprehend these innuendoes. Your readers may possibly imagine that some infamous plot had been concocted, and that instead of having written the letter almost as the idea occurred to me, I had been "brooding in solemn silence" over it. The wonderful circumstances are simple in the extreme. The woman came among my out-patients seeking relief. She was a perfect stranger to me, as I to her. She told her tale, and I sent her to the examining room, and afterwards made the note in my out-patient book, as is my wont. At a subsequent visit (I think her second) I examined her again, and four senior men who happened to be nearest the couch did likewise. They were satisfied of the state of parts as I described them, and, as I believed, correctly. It was only after I had examined her—on the first occasion—that she volunteered the statement that she had been operated on, and it was then I told her she had better see Mr. Treves. I hope, I need scarcely say, that no remark was dropped which she could possibly misconstrue.

I am afraid I have left but little space for the point which I think the most important—viz., the surgical one. I have said, and desire to repeat it, that narrowing of the rectum (if Mr. Treves objects to the word stricture) does and must follow most cases of complete or partial excision of the rectum, whether for prolapse or any other condition. Mr. Treves appeals to theoretical grounds, with which I have no concern; but experience teaches all that destruction of mucous membrane alone, or of skin alone, produces contraction. This is the very principle on which the cautery is applied in prolapse. Moreover, do we not see stricture, kinking, &c., follow ulceration of the intestinal mucous membrane, and entropion follow a similar condition of the palpebral conjunctiva? Let me refer Mr. Treves to the chapter on stricture of his well-known work on "Obstruction," and to the chapter on prolapse of the rectum in Mr. Ball's excellent work on Diseases of the Rectum in the same series. Mr. Treves attributes the cicatricial tissue in this case to two operations with the cautery to which his patient had been subjected. Seeing that the surgeons under whose care the patient had previously been, and who had burned her—one eighteen and the other five years ago—and observing, moreover, that they would have limited their cauterisation to the mucous membrane, and noting, moreover, that Mr. Treves excised the prolapse which was not cured by the burning, it seems rather hard to debit the contraction existing to the previous efforts of his benighted colleagues. I am quite willing to accept Mr. Treves' challenge that any surgeon interested should examine the patient, but I must ask all before doing so to put on their thinking-caps, and to remember that the conditions must be the same—i.e., that the case should be left to Nature's processes for an equal length of time (nearly three months), and that no digital dilatation, however gradual and unintentional, should intervene, for all those experienced in rectal surgery know how readily a recent traumatic or pathological stricture yields to distensive application.

There are other questions, such as the comparative uselessness of pulling down and attaching mucous membrane to anus &c., on which I should like to speak, but this letter is too long for my taste already; therefore, Sirs, seeing that I have neither intended, nor done, so far as I can see, wrong to anyone, I beg to subscribe myself,

Yours faithfully,

March, 1890. H. A. REEVES.

INFLUENZA AND ITS RISKS.

To the Editors of THE LANCET.

SIRS,—The tendency of influenza to find out the weak points of any person who has the misfortune to be the subject of it is known to all your readers; but the following cases are so striking, and, happening as they did on two following nights, may have some interest, and serve to show the need for the profession to caution the public not to neglect extra care, be the attack ever so slight.

The first case was that of a young farmer, twenty years of age, of neurotic temperament, who, with the exception of a tendency to a mild epileptiform seizure (which, though frequent during boyhood, had not been noticed for three years), had no medical history. He was seized with a mild attack of influenza, but sought no medical advice. On the evening of the fourth day of the disease he went to bed early, and soon fell asleep. About 12.30 A.M. he jumped out of bed, ran into another room, knocked his mother down when she attempted to restrain him, behaved like a violent maniac, and finally threw himself on the floor, and was seized with a severe convulsive fit. The tongue was protruded, but there was no evidence of its having been bitten. When seen two hours afterwards all mental excitement was over.

The patient in the second case was also a farmer, aged forty, married, of temperate habits and usually healthy, complaining occasionally of dyspepsia, with ill-defined cardiac symptoms. He had influenza mildly. On the eighth day of the disease, at about 11.30 P.M., he awoke from sleep with a feeling of extreme suffocation and horror, and went through all the distress of a severe attack of angina. As he lives seven miles from me, the active symptoms had passed off before I saw him, but enough remained to tell me how acute his sufferings had been. Careful examination showed no evidence of anything more than functional disturbance. I am, Sirs, yours obediently,

Swaffham, Feb. 25th, 1890. ROB. B. MARRIOTT, M.R.C.S.

TOOGOOD *v.* WILKES.

To the Editors of THE LANCET.

SIRS,—The following additional subscriptions to the Wilkes Indemnity Fund have been received. The list will shortly close.

I am, Sirs, yours faithfully,

H. J. MANNING, Hon. Treasurer.

Laverstock House, Salisbury, March 25th, 1890.

J. W. Gosse, Esq.	£1	1	0	A. F. Van, Esq.	£1	1	0
T. J. Tucker, Esq.	2	0	0	Dr. E. L. Fox	2	2	0
C. S. Evans, Esq.	0	10	0	C. Clay, Esq.	1	1	0
Dr. Quain, F.R.S.	2	2	0	A. F. Shapland, Esq.	1	1	0
R. T. Finch, Esq.	1	0	0		£16	12	6
T. H. Taylor, Esq.	1	1	0	Sums already announced	40	11	7
E. C. Board, Esq.	1	1	0				
F. T. Flower, Esq.	0	10	6	Total	£57	4	1
C. R. Straton, Esq.	2	2	0				

INSTRUMENT FOR RELIEF OF RETENTION OF URINE.

To the Editors of THE LANCET.

SIRS,—My instrument-makers (Messrs. Fannin & Co., Grafton-street, Dublin) have called my attention to a description of a new instrument for the relief of retention of urine, appearing in your issue of the 22nd inst., by Mr. A. E. Davis, St. George's-square, Liverpool, and made for him by Messrs. Arnold and Sons. Permit me to state that an instrument in every particular identical with the one now described by Mr. Davis was invented by me, and made to my order by Messrs. Fannin and Co., four years ago; that the same instrument was exhibited at the meeting of the British Medical Association held in Dublin in 1887; that my name, identified with the same instrument, appears in Messrs. Fannin and Co.'s Catalogue of Medical and Surgical Instruments, 1887; and, further, that the same instrument has had a favourable reception by the surgical branch of the profession here since its introduction. I fully believe that Mr. Davis has sent you a description of the instrument in all good faith, but unaware of the above facts. I only claim to have modified an instrument invented by Mr. Harrisson many years ago.—Yours faithfully,

W. J. HEPBURN,

One of the Visiting Surgeons, Meath Hospital and

Dublin, March 25th, 1890. County Dublin Infirmary.

EYE DISEASES IN THE RUSSIAN ARMY.

DR. ABKOVICH, commenting in a Russian military medical journal on a recent treatise on eye diseases in the army, strongly insists on the necessity of a better knowledge of sanitary laws on the part of officers, proving the justice of his demand by mentioning some hardly credible orders given in direct opposition to the most obvious hygienic ideas. The writer demands the disinfection of all old uniforms, and the distribution of leather jackets and moleskin trousers to the soldiers when they are discharged in the autumn for so-called free labour.

Adrian.—The question is answered in our Students' Number published in September last.

"THE CLARIONET."

To the Editors of THE LANCET.

SIRS,—In reply to "B Flat," I beg to say that I used to play the cornet, and found that it had a decided tendency to increase some friction and pain of dry pleurisy from which I suffered. I then changed to the clarionet, with complete relief to the symptoms. I was after a few years tempted to return to a brass instrument, and had a return of the pain. I think that with moderate skill there could be no injury to the neck from playing the clarionet. It is not a question of hard blowing, but of "knack" in the management of the reed, and in keeping the whole instrument in order. I think a wood instrument requires almost as much care as a watch. The clarionet is very nice for playing airs with pianoforte accompaniment, and it is a pity so little solo music is written for it. I am, Sirs, yours truly,

March 25th, 1890. C NATURAL.

WANTED, A SUGGESTION.

To the Editors of THE LANCET.

SIRS,—If any of your readers can give me a suggestion as to the treatment of the following case I shall be obliged.

A lady suffers from a hot flush all over her. The skin is red, dry, and hot for a minute or two, followed by perspiration, then faintness, and in about ten minutes she is all right. These attacks have continued every few hours for three months, with increasing severity, and disturb her from sound sleep at night. She is fifty years old, married, no children. Menstruation ceased a year ago, and she was perfectly well for nine months afterwards. At the present time I consider her in perfect health, excepting this trouble. She is not of a nervous or hysterical temperament. I have given quinine and various drugs with no good result. I am, Sirs, faithfully yours,

Enfield, March 18th, 1890. J. COLLYER, L.R.C.P., &c.

THE GUINNESS TRUST: EARL CADOGAN'S GIFT.

To the Editors of THE LANCET.

SIRS,—It having been widely circulated in the daily papers that Lord Cadogan has purchased the remainder of the lease of Blacklands House Estate, Chelsea, we beg to state on behalf of Messrs. Sutherland, the lessees, that they have no intention of relinquishing their business, which has been carried on at that house for nearly eighty years. They have succeeded in finding a residence, "Newlands House," Tooting-common, which has already been viewed by the Commissioners in Lunacy, and which they believe to be suitable for the care and treatment of their insane patients, who will shortly be removed there.

We trust that you will insert this letter in your valuable columns in justice to our clients, whose interests might otherwise be seriously prejudiced.—We remain, Sirs, your obedient servants,

TATHAMS AND PYM,
Solicitors for the Messrs. Sutherland.

Frederick's-place, E.C., March 26th, 1890.

METHOD OF DILATING THE EUSTACHIAN TUBES.

To the Editors of THE LANCET.

SIRS,—I beg to submit a simple method for dilating the Eustachian tubes when the practitioner does not happen to have his Politzer's bag with him, and one which can be practised by the patient without fear of doing any injury. It consists in directing the patient to hold his nose and at the same time swallow the air contained in his mouth. The act of swallowing opens the end of the Eustachian tube, and the air contained in the mouth is forced along the tubes. This method can be modified by directing the patient to take a sip of water into the mouth, hold his nose, and then swallow the water. Of course, this method is not so thorough as Politzer's bag, but in mild cases of Eustachian catarrh will be found effective in dilating and keeping patent the Eustachian tube.—I am, Sirs, your truly,

HERBERT A. LAWTON, D.P.H.Lond., M.R.C.S., &c.

Poole, March 22nd, 1890.

HEREDITARY TRANSMISSION OF MUTILATION.

To the Editors of THE LANCET.

SIRS,—With reference to the above subject I can make a contribution of some interest. It came under my own personal observation many years ago.

A sheep about the time of impregnation got worried by a dog, and had her throat extensively torn. In due time the sheep had one lamb. The jaws were grown together, and the head had the appearance of that of a dog. There was an opening in the throat, through which the monstrosity breathed. I am, Sirs, yours faithfully,

Belfast. W. K. MCMORDIE.

THE CASE OF CÆSAREAN SECTION AT THE KENSINGTON INFIRMARY.

WE have received several communications on the above subject, which shall have attention next week.

Mr. Philip Jones.—1. No.—2. Yes, if the lectures are given by recognised teachers in a recognised institution.—3. We are not aware of the amount of fees.—4. Melbourne itself, we believe, is already overstocked, but a practice might be gained in the back settlements.

G. P. P.—A large amount of information on the nature and treatment of the disease is contained in a Dutch work by Drs. Pekelharing and Winkler—a work which was reviewed in THE LANCET of June.

Energy.—Our correspondent should be guided by the advice of his solicitor.

"'DR.' SHERMAN OF CHANCERY-LANE."

To the Editors of THE LANCET.

SIRS,—One of the footmen of a friend of mine suddenly caused a violent commotion by declaring himself to be in a dying state. In the middle of the night I was called in, and considerably puzzled to discover any cause for the terrible groans and exclamations. It seems that the lad (a foreigner), attracted by "Dr." Sherman's advertisement, had consulted him, and, owing to the display of dreadful pictures of persons dying in all sorts of uncomfortable attitudes, the lad's mind became so pervaded with the idea of strangulated hernia that it needed only a copious feed of pickled pork to bring matters to a climax. However, a stiff dose of calomel and colocynth prolonged this endangered life; but I had great difficulty in persuading him that he had not strangulated hernia. I am, Sirs, yours obediently,

Selhurst Park, S.E., March 24th, 1890. J. G. CARRUTHERS.

THE ADVANTAGE OF BEING DOUBLY QUALIFIED.

To the Editors of THE LANCET.

SIRS,—Kindly give me your opinion on the following case.

The post of medical officer to our infectious hospital became vacant a short time ago, and the local board sent notice thereof to each of the medical men in the district. Some six or seven of us applied for the appointment. In due time the local board sat in solemn conclave, and, after much deliberation, elected as their medical officer the only applicant who was without a medical qualification. Yours truly,

March 24th, 1890. G. P.

*** The action of the sanitary authority, as submitted to us, seems altogether indefensible. If there be an appointment where evidence of medical, as distinguished from surgical, knowledge and skill is required, it is in the case of a "medical" officer to an infectious hospital.—ED. L.

Juvens.—The law is powerless in the case of a man who does not, by the use of a registrable title, hold himself out as a qualified medical practitioner.

Mr. T. D. Burrows (Kelseyville, California).—We do not give medical advice.

COMMUNICATIONS, LETTERS, &c., have been received from—Dr. Lauder Brunton, London; Dr. Carpenter, Croydon; Sir J. Fayrer; Sir Wm. Moore; Dr. Collingridge, London; Lord Compton, London; Dr. S. West, London; Dr. Warner, London; Mons. Midy, Paris; Dr. Sutton, Sittingbourne; Mr. Hepburn, Dublin; Mr. Tibbles, Melton Mowbray; Mr. Makins, London; Mr. S. Barton, Norwich; Messrs. Van Houten and Zoon, Holland; Mr. Wells, London; Dr. A. H. Frere, Wickham Market; Mr. Somers, Holbeach; Mr. J. Drummond; Messrs. Griffin and Co., London; Dr. F. Beach, Dartsord; Mr. Purvis, Bridlington Quay; Dr. Cruise, Dublin; Mr. Carruthers, London; Messrs. Christy and Co., London; Dr. McMordie, Belfast; Mr. Lathbuay, Barton Needwood; Mr. Woodcock, Bradford; Mr. Hagyard, Hull; Mr. Greig Smith, Clifton; Mr. Horsfall, Leeds; Dr. Lewers, London; Dr. Scott Lang, London; Mr. G. H. Ormsby, Slaidburn; Messrs. Ferguson and Co., Glasgow; Dr. L. Benham, London; Mr. Ashby, Reading; Mr. E. Kitto, Falmouth; Mr. Kingzett, London; Dr. Thudichum; Mr. L. Ash, Holsworthy; Dr. Rentoul, Liverpool; Mr. E. G. Walker, Liverpool; Dr. J. Jamieson, Edinburgh; Dr. Atkinson, Surbiton; Mr. T. Cook, Toronto; Mr. Collyer, Enfield; Mr. C. S. Jeaffreson, Newcastle-on-Tyne; Dr. Barr, Liverpool; Mr. Beverley, Scarborough; Dr. J. Oliver, London; Mr. Lawton, Poole; Dr. McLeod, Calcutta; Dr. H. Gibbes, Michigan; Mr. H. R. Bramwell, Stapleford; Messrs. Allen and Hanburys, London; Mr. J. A. Jones, Aberavon; Messrs. Kilner Bros., London; Mr. O'Callaghan, Carlow; Dr. W. Squire; Mr. Pridgin Teale, Leeds; Dr. Alex. Wallace, Colchester; Messrs. Rowntree and Co., York; Mr. Locke, Rotherham; Mr. Hall, Brighton; Mr. D'Arcy Power, London; Mr. J. R. Motion, Glasgow; Messrs. G. Street and Co., London; Mr. Bilberg, London; M. Durand, Paris; Mr. Arbuthnot Lane, London; Mr. Branthwaite, Worcestershire; Mr. Whitley, West Brompton; Dr. Snow; Mr. Beeching, Maidstone; Mr. Linney, New Zealand; Mr. J. Carter, London; Dr. Althaus, London; Dr. Arthur, Brighton; Mr. Saunders, Manchester; Mr. Griffiths, Bristol; Mr. K. Kukherjea, Bengal; Miss Macdonald, Westminster; Dr. J. Corney, Ayr; Mr. Graham, Glasgow; Mr. Cass, Goole; Dr. Weir, Dorset; Miss Powles, Ipswich; Mr. Heaton, Handsworth; Mr. White, Harrogate; Mr. Dingle, Bath; Mr. Tumble, Enniskillen; Mr. Crasweller,

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LETTERS, *each with enclosure*, are also acknowledged from—Mr. Birchall, Liverpool; Dr. Stanley, Sheffield; Dr. Rhodes, Elland; Messrs. Lee and Martin, Birmingham; Mr. Bowen, Portsmouth; Dr. Davies, Ebbw Vale; Mr. Moulson, Sheffield; Mr. Peddie, Staffs; Messrs. Back and Co., London; Mr. Rutherford, Newcastle; Messrs. Hopkinson and Co., Notts; Dr. Soden, Coventry; Mr. Draper; Mr. Walker, Upper Holloway; Dr. Forster, Chatham; Mr. Allnutt; Mr. Parsons, South Paddington; Mr. Brown, Westgate-on-Sea; Mr. Edwards, South Wales; Mr. Aveling, Paddington; Mrs. Cartwright, Leamington; Mr. Fleming, Godalming; Mr. Challand, Derbyshire; Mr. Partridge, Ludlow; Mr. Knowles, Barnsley; Dr. Savage, Lisburne; Dr. Brown, Staffs; Mr. Hensley, Burnley; Mr. Danaher, Oldham; Mr. Fletcher, Keighley; Mr. Grubb, Ireland; Mr. Tully, Hastings; Messrs. Price, Battersea; Mr. Lewis, Swansea; Mr. Vicar, Boston; Dr. Humphreys, Montgomery; Mr. Tyte, Minchinhampton; Dr. Mason, Monmouthshire; Dr. Tate, Nottingham; Dr. Windle, Halifax; Dr. Warburton, Halifax; Mr. Ainley, Halifax; Mr. Johnson, Monmouth; Mr. Rose, Darlaston; Mr. Parkinson, Sacramento, Canada; Mr. Brice, jun., Exeter; Mr. J. Ward, London; Mr. Grose, Middlesbro'; Mr. Mavan, Maidenhead; Mr. Rolston, Uxbridge; Mr. Heywood, Manchester; Mr. Cropley, Northampton; Mr. Pizzala; Mr. Robertson, London; Sigma, M.D., London; M.D., Finchley-road; Secretary, Eastbourne Borough Sanatorium; Delta, London; Medico, Folkestone; Sussex County Hospital, Brighton; Statim, Liverpool; Matron, Samaritan Hospital, Notts; Vendor, London; Medicus, London; Hopeful; The Hermitage, Yorks; Cantab, London; Alpha, Manchester; Chiretta, London; Barnes, Hants; Portsmouth, London; B., London; Kali, London; Hooper, London; Hydro, London; Hooper, London; Regex, London; Surgeon, Leeds; Alpha, Cheshire; Superintendent, Lancashire; M. C. A., Norfolk; Utilis, London; Avis, London; M. H., Russell-square; G. V., London; Virgil, London; Secretary, Glasgow Royal Infirmary; Dexter, London; Midlands, London; C., Nottingham; M. M., Chiswick; Surgeon, Keighley; M., Ramsgate; Sanitas, Sheffield; Medicine, Leeds; Omega, Staffs; Practice, London.

NEWSPAPERS.—*Braintree and Bocking Advertiser, Yorkshire Post, Overland Mail, Figaro, Liverpool Daily Post, Sunday Times, Kilkenny Journal, Daily Telegraph, Builder, West Middlesex Standard, Catholic Times, Broad Arrow, Leeds Mercury, Chemist and Druggist, Sheffield Daily Telegraph, Metropolitan Nursing Record, Hampshire Telegraph and Sussex Chronicle, Weekly Free Press, Bristol Mercury, City Press, Local Government Chronicle, New York Herald (London), Pall Mall Gazette, Reading Mercury, Hertfordshire Mercury, West Middlesex Advertiser, Public Opinion, Windsor and Eton Express, Eastern Daily Press (Norwich), Surrey Advertiser, Mining Journal, Puck, St. James's Gazette, Bombay Gazette, Evening Press (York), Daily Chronicle, Newcastle Daily Chronicle, Baker's Record, Glasgow Evening Citizen, Quebec Daily Telegraph, Rangoon Times, Hairdressers' Weekly Journal, Liverpool Journal of Commerce, Belfast News Letter, Quebec Morning Chronicle*, &c., have been received.

Medical Diary for the ensuing Week.

Monday, March 31.

CHARING-CROSS HOSPITAL.—Operations, 3 P.M.
ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, daily at 10 A.M.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1.30 P.M., and each day at the same hour.
CHELSEA HOSPITAL FOR WOMEN.—Operations, 2.30 P.M.; Thursday, 2.30.
ST. MARK'S HOSPITAL.—Operations, 2.30 P.M.; Tuesday, 2.30 P.M.
HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and each day in the week at the same hour.
UNIVERSITY COLLEGE HOSPITAL.—Ear and Throat Department, 9 A.M.; Thursday, 9 A.M.
MEDICAL SOCIETY OF LONDON.—8.30 P.M. Mr. Ballance: The Removal of Pyæmic Thrombi from the Lateral Sinus.—Dr. W. Hunter: Case of Pernicious Anæmia.

Tuesday, April 1.

KING'S COLLEGE HOSPITAL.—Operations, 2 P.M.; Fridays and Saturdays at the same hour.
GUY'S HOSPITAL.—Operations, 1.30 P.M., and on Friday at same hour. Ophthalmic Operations on Monday at 1.30 and Thursday at 2 P.M.
ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 4 P.M.; Friday, 2 P.M.
CANCER HOSPITAL, BROMPTON.—Operations, 2 P.M.; Saturday, 2 P.M.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 2.30 P.M.
ST. MARY'S HOSPITAL.—Operations, 1.30 P.M. Consultations, Monday, 2.30 P.M. Skin Department, Monday and Thursday, 9.30 A.M. Throat Department, Tuesdays and Fridays, 1.30 P.M. Electro-therapeutics, same days, 2 P.M.
PATHOLOGICAL SOCIETY OF LONDON.—8.30 P.M. Dr. W. J. Collins: Cancer of Œsophagus eroding Trachea.—Mr. Watson Cheyne: Central Necrosis of Radius without Suppuration.—Mr. J. Hutchinson, jun.: Lymphatic Nævus of Tongue.—Mr. Arthur Barker: Macroglossia.—Dr. W. K. Sibley: Tuberculosis in Fowls and other Birds, and the Resemblance of the Disease to Leprosy.—Mr. Edgar Willet: Fracture-dislocation of Spine successfully treated by Operation.—Dr. Little: Microscopic Sections of Enlarged Spleen from a Child. Card Specimens.

Wednesday, April 2.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.
MIDDLESEX HOSPITAL.—Operations, 1 P.M. Operations by the Obstetric Physicians on Thursdays at 2 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour. Ophthalmic Operations, Tuesday and Thursday, 1.30 P.M. Surgical Consultations, Thursday, 1.30 P.M.
ST. THOMAS'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour.
LONDON HOSPITAL.—Operations, 2 P.M. Thursday & Saturday, same hour.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2.30 P.M.
GREAT NORTHERN CENTRAL HOSPITAL.—Operations, 2 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; Skin Department, 1.45 P.M.; Saturday, 9.15 A.M.
ROYAL FREE HOSPITAL.—Operations, 2 P.M., and on Saturday.
CHILDREN'S HOSPITAL, GREAT ORMOND-STREET.—Operations, 9.30 A.M.; Surgical Visits on Wednesday and Saturday at 9.15 A.M.
OBSTETRICAL SOCIETY OF LONDON (20, Hanover-square, W.).—8 P.M. Specimens by Dr. Cullingworth, Mr. Bland Sutton, Dr. Dakin, and others. Dr. Cullingworth: On Vaginal Hysterectomy for Cancer of the Cervix.—Dr. E. Sinclair Stevenson: Case of Spurious Pregnancy simulating Ectopic Gestation.

Thursday, April 3.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M. Surgical Consultations, Wednesday, 1.30 P.M. Ophthalmic Operations, Friday, 1.30 P.M.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; Ear and Throat Department, 9 A.M.

Friday, April 4.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

Saturday, April 5.

MIDDLESEX HOSPITAL.—Operations, 2 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; and Skin Department, 9.15 A.M.

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